



Docket No.: 03485/100H799-US1
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:

Anand SUBRAMANIAN, et al.

Confirmation No. 4306

Application No.: 10/001,772

Art Unit: 3688

Filed: October 31, 2001

Examiner: Raquel Alvarez

For: INTERNET CONTEXTUAL
ADVERTISEMENT DELIVERY SYSTEM
AND METHOD

APPELLANTS' THIRD BRIEF ON APPEAL UNDER 37 C.F.R. § 41.37

MS Appeal Brief – Patents
Acting Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Madam:

Appellants submit this Brief in accordance with 37 C.F.R. § 41.37 in support of their appeal from the Final Office Action, mailed February 25, 2009 by Examiner Raquel Alvarez, and the Advisory Action, mailed May 11, 2009, in the above-identified patent application.

The present application has been granted special status (See, Decision on Petition to Make Special, mailed April 14, 2004). Accordingly, Appellants request accelerated treatment of this brief.

This third Appeal Brief is being filed after prosecution was reopened subsequent to the filing of a Request for Continued Examination (RCE) on January 14, 2009. In accordance with 37 C.F.R. §§ 41.31, 41.37 and 41.47, this brief is being filed together with a Request for Oral Hearing. The Appeal Brief is timely filed within two months of filing a Notice of Appeal, which was timely filed on June 18, 2009 together with a Petition for a one-month extension of time.

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02 FC:2402 60.03 DA 210.00 CP

08/10/2009 SDENB083 00000027 040100 10001772
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Appellants submit that the fee for the Notice of Appeal was paid on January 11, 2006. Appellants further submit that the fee for a first Appeal Brief was paid on April 27, 2006. Additionally, a Request for Oral Hearing, accompanied by the required fee, was filed on April 27, 2006. Thus, in accordance with MPEP § 1204.1, the proper fee for filing this third Appeal Brief and a present Request for Oral Hearing amounts to the difference between the associated current fees and the amount previously paid on April 27, 2006. Payment for this difference, which is believed to be \$60.00, is enclosed herewith. In addition, the Commissioner is hereby authorized to charge any unpaid fees deemed required in connection with this second Appeal Brief and Request for Oral Hearing, or to credit any overpayment, to Deposit Account No. 04-0100.

I. REAL PARTY IN INTEREST

The real party in interest for this appeal is ContextWeb, Inc. The inventors have assigned their rights in and to this application to ContextWeb, Inc., such assignment having been duly recorded.

II. RELATED APPEALS AND INTERFERENCES

To appellants' knowledge, there are no other appeals, interferences, or judicial proceedings which are directly related to, will directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

III. STATUS OF CLAIMS

Claims 1-89 are pending in the application, with claims 1-14, 17-20 and 23-26 withdrawn from consideration.

This appeal is in respect of the rejection of claims 15, 16, 21, 22 and 27-89. There are 67 claims rejected in the application, *i.e.*, claims 15, 16, 21, 22 and 27-89.

All pending claims are reproduced in the Claims Appendix. The current status of the application's claims is as follows:

1. Claims canceled: none;
2. Claims withdrawn from consideration but not canceled: 1-14, 17-20 and 23-26;
3. Claims 1-14, 17-20 and 23-26 stand withdrawn in response to a telephone Restriction Requirement imposed by the Examiner. The Patent Office required an election to be made in order to decide whether a Petition to Make Special should be granted.
4. Claims pending: 15, 16, 21, 22 and 27-89;
5. Claims allowed: none;
6. Claims rejected: 15, 16, 21, 22 and 27-89.

IV. STATUS OF AMENDMENTS

A final Office Action was mailed on February 25, 2009. An Amendment in Response to Final Office Action was mailed on April 27, 2009, presenting arguments and further amending claim 89. On May 11, 2009, an Advisory Action was mailed indicating the Examiner's determination that the Amendment of April 27, 2009 did not place the application in condition for allowance, and indicating that the amendments to claim 89 would be entered for the purposes of appeal.

V. SUMMARY OF CLAIMED SUBJECT MATTER

The claimed invention is directed to systems and methods for delivering advertisements to "a user viewing content operating a station connected to a distributed computer network." For example, *see* claim 15, preamble. Independent system claim 15 recites "an ad server which

maintains the ads,” (Specification, page 25, lines 4-8; Fig. 10, item 122), and “a data store containing a set of relevancy rules associated with each ad, the rules being operable to indicate a level of relevancy of the ad **to the content of the information retrieved [by the user]**” (Specification, page 25, line 11 bridging page 26, line 15; Fig. 10, item 100 and Fig. 11, item 110). *See* claim 15 (emphasis added).

Claim 15 further recites “a matchmaker” that “in response to the submission of a Uniform Resource Locator (“URL”) by the user at the operating station, access[es] the content retrieved by the user,” “extract[s] the content according to extracting rules,” “parse[s] the content of the information into objects,” and “target[s] an ad from the server to the content by applying the relevancy rules in the data store to the objects, free of information about the user,” (Specification, page 26, lines 19-23; Fig. 10, item 30). *See* claim 15 (emphasis added). Also, *see generally*, Specification, page 27, line 1 bridging page 28, line 20.

Independent system claim 89 is broadly directed to similar subject matter and recites “a server for storing [] ads,” (Specification, page 25, lines 4-8; Fig. 10, item 122), “a memory containing a set of relevancy rules,” (Specification, page 25, line 11 bridging page 26, line 15; Fig. 10, item 100 and Fig. 11, item 110), and “a module” that accesses information retrieved by the user, extracts the content based on rules, parses the content into objects and corresponding attributes, groups objects with associated attributes, targets an ad by applying the rules to the grouped objects and attributes, free of information about the user, and sends the targeted ad to the user station for display with the content (Specification, page 26, lines 19-23; Fig. 10, item 30).

Independent method claim 21 is directed to a method for presenting to a user, viewing content, targeted ads along with content being viewed. Claim 21 recites the steps of “maintaining ads, identifying a set of relevancy rules, accessing information, extracting content, parsing the content, and targeting ads to the content, and displaying the targeted ads along with the content. *See* Specification, page 27, line 1 bridging page 28, line 20; *see generally* Specification page 25, line 4 bridging page 26, line 23.

Dependent claim 36 depends from claim 35, which depends from claim 15. Claim 15 further recites that the rules enable a classification of the content according to a channel, the channel being one of an object, a group of objects, a classification of objects or a structural relationship among objects. Claim 36 further recites that the channel into which content is classified is related to past consumption by users as a consequence of ads that were received and responded to by the users.

The claimed invention determines the relevancy of an advertisement in relation to information retrieved by the user (and which is free of information **about** the user), in response to the submission of a URL by the user, and directly displays the advertisement together with the content of the retrieved information at the user's station.

Furthermore, the claimed invention accomplishes displaying an ad together with the user-viewed content without any user profile information being necessary. It employs a URL associated with a page being viewed by the user, and processes the content of this page to determine the context comprising of keyword phrases, versus using the keyword phrase explicitly typed by the user.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

1) Whether claims 15, 16, 21, 22 and 27-89 can properly be rejected under 35 U.S.C. § 103(a) as being obvious over U.S. Patent No. 7,076,443 to Emens et al. ("Emens") in view of U.S. Patent No. 5,835,087 to Herz et al. ("Herz").

2) Whether claim 36 can properly be rejected under 35 U.S.C. § 103(a) as being obvious over U.S. Patent No. 7,076,443 to Emens et al. ("Emens") in view of U.S. Patent No. 5,835,087 to Herz et al. ("Herz") and the Examiner's Official Notice.

VII. ARGUMENT

Grounds of Rejection No. 1

Appellants submit that the claimed invention is patentable over the combination of Emens and Herz for at least the reasons outlined by the following key points:

Point 1: The effect of the user submitting a URL according to the claimed invention is that an advertisement and the content at the URL are pulled to a user's work station for display together. Emens neither discloses nor suggests displaying the requested content and the targeted ad together in direct response to the submission of the URL. Rather, after receiving and viewing the displayed content, Emens requires the user to then select a product icon to receive a selection of product advertisements.

Point 2: The Examiner acknowledges that Emens does not teach accessing content in response to the submission of a URL, but contends that it would be obvious to use a URL to obtain the content in view of Herz. Herz does not in fact explicitly teach the use of URLs for accessing content, but rather teaches that a user may log into a network to activate a news reading program which retrieves content based on a pre-existing user profile associated with a user account. Moreover, because Emens clearly teaches away from a system like that of Herz using user profiles to retrieve content, one skilled in the art at the time of the present invention would not have combined Emens with Herz in the manner suggested by the Examiner.

Point 3: Even if Emens were combined with Herz, the result would not be the claimed invention, because the combination still fails to teach or suggest displaying the requested content and the targeted ad together in direct response to the submission of the URL.

Elaboration of Point 1

Emens neither discloses nor suggests displaying the requested content and the targeted ad together in direct response to the submission of the URL. Rather, after receiving

and viewing the displayed content, Emens requires the user to then select a product icon to receive a selection of product advertisements.

Independent claim 15 of the claimed invention is directed to a system for delivering ads that, *inter alia*, includes a matchmaker that is configured upon receiving a URL requesting content to **“directly send the targeted ad to the station for display with the content.”** Independent claim 89 recites similar subject matter, and independent method claim 21 recites the step of “displaying the targeted ads at the station with the content.”

By way of contrast to the claimed subject matter, Emens teaches a system in which **only one** rather than both of requested content and an associated ad are displayed together in response to a user request:

The search engine then returns a specific search result set showing items which may contain the sought after information. For each search result item, a graphical user interface (GUI) selection is presented, **allowing the user to select the GUI, on demand if so desired, to investigate related advertisements.**

Emens, Col. 4, line 65 thru Col. 5, line 3 (emphasis added).

Emens, at Col. 7, lines 50-51, reiterates that “advertisements can . . . be provided on the user’s demand.” In this manner, Emens clearly distinguishes the **icon or link** for requesting one or more advertisements from the **advertisement** that is **provided after the user selects the icon or link**. Thus, and in sharp contrast to the claimed invention, Emens fails to teach or suggest a system that displays an ad **together** with search content. Herz suffers this same deficiency.

The Examiner acknowledges that Emens discloses that the “search result items and associated product icons are . . . displayed to the browser 100.” (for example, Detailed Action of February 25, 2009, top of page 3.) The Examiner however contends that “the product icon is a targeted advertisement based on the search result.” (for example, first paragraph of Response to Arguments in Detailed Action of February 25, 2009, page 4), making reference to Col. 7, lines 11 – 18 of Emens:

The request server 160 then builds a results page which contains the search result items, and if the search result item was flagged as a having a product match, a product icon or graphical user interface designator is also displayed for subsequent user selection. The search result items and associated product icons are then displayed 98 to the browser 100.

Appellants disagree. Simply stated, an icon is **not** an advertisement. Rather, it is “[a] **picture** on a screen that **represents** a specific file, directory, window, option, or program” (emphasis added).¹

Emens’ icon as described does **not** directly provide information promoting a particular product or service.² More specifically, Emens’ icon does **not** present an advertisement, but instead presents an indication that **one or more relevant ads are available for retrieval** at the user’s discretion. As described, for example, by Emens at Col. 7: 21 – 45, selection of the icon causes a listing of matching ads (“products”) to be returned for display in a separate screen:

The request server 160 displays the results that the user will receive from the query, product matching, and results presentation pass. **The user may either select from the search result set as before, or select a product icon corresponding to each search result item having at least one product advertisement associated with it in the search result set.** If the user selects a search result item (not the product icon), he or she is ultimately shown the information pertaining to that item. However, if the user requests a product 95 by selecting the product icon, the user/session manager 120 routes the product request 95 to the product presentation or product listing manager 150.

The product presentation manager 150 then references the products in the Product Database 110. Products which match this search result item are then formulated into one list and passed to the request server or results presentation manager 160.

The result presentation manager 160 builds a results page which now contains the initial single search result item along with a list

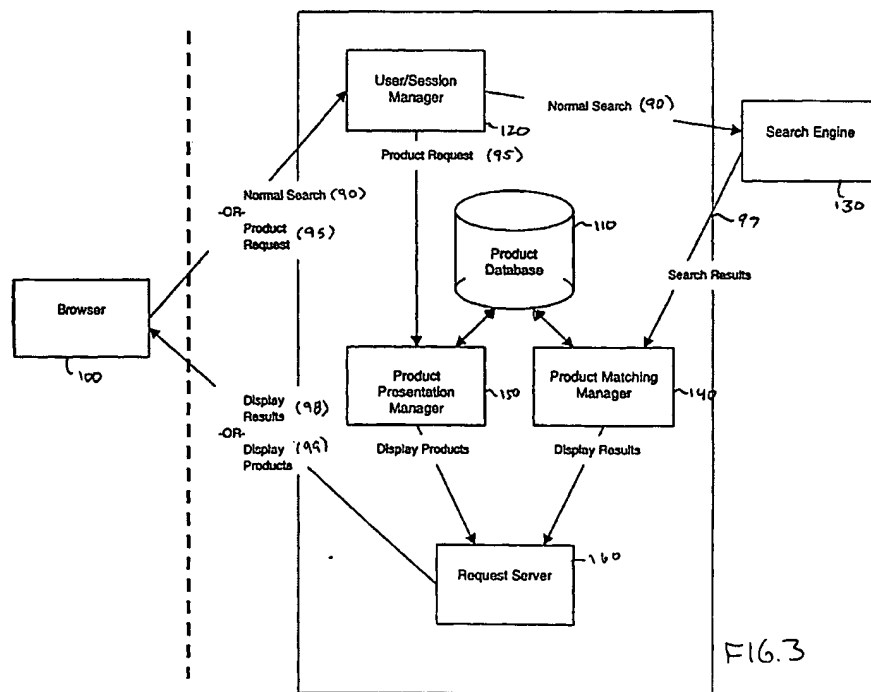
¹ <http://www.thefreedictionary.com/icon>

² An advertisement is “[a] notice, such as a poster or a paid announcement in the print, broadcast, or electronic media, designed to attract public attention or patronage.” <http://www.thefreedictionary.com/advertisement>.

of products from which the user may select on demand. This results page is sent 99 to the browser 100 to display the selected search result item with its corresponding products. The format of this results page can be anything from a text based match list or a full graphical, and which includes HTML and/or graphics which illustrate this product along with corresponding hyperlinks to each of the third party products.

(Emphasis added).

FIG. 3 further emphasizes that the output of the result presentation manager 160 is either to display results 98 **or** to display products 99, based on whether a normal (content) request 90 or a product request (selection of the icon) 95 has been received at the user/session manager 120, rather than to display results and products **together** as a result of receiving a normal content request alone:



Thus, and in contrast to Appellants' claimed invention, Emens fails to teach or suggest a matchmaker that, **upon receipt of a URL** specifying information content requested by a user, accomplishes **each** of the tasks of **accessing the content** and **directly sending a targeted ad to the**

station for display with the content, without any further action being required by the user. These elements of the claimed invention are also missing from Herz.

Elaboration of Point 2

The Examiner acknowledges that Emens does not teach accessing content in response to the submission of a URL, but contends that it would be obvious to use a URL to obtain the content in view of Herz. Herz does not in fact explicitly teach the use of URLs for accessing content, but rather teaches that a user may log into a network to activate a news reading program which retrieves content based on a pre-existing user profile associated with a user account. Moreover, because Emens clearly teaches away from a system like that of Herz using user profiles to retrieve content, one skilled in the art at the time of the present invention would not have combined Emens with Herz in the manner suggested by the Examiner.

Appellants note that Herz makes no explicit reference to a URL. At step 1102 of Fig. 10, Herz teaches that a user may make a request to retrieve news articles after logging into a network and activating a news reading program. The Examiner suggests that this step is equivalent to the “submission of a URL” as claimed by Appellants. Appellants respectfully disagree. The process of accessing content by submitting user information (i.e., a user log-in and user profile information) is clearly different and distinct from the process of accessing content by submitting a URL.

Even assuming *arguendo* that Herz can reasonably be read as the Examiner suggests, one skilled in the art at the time of the present invention would never-the-less have little reason to look to Herz for the purpose of modifying the teachings of Emens.

Emens teaches that prior art advertising systems (i.e., like Herz) rely on user information (i.e., user profiles) to select advertising, and that such systems are disadvantageous because, *inter alia*, they require continuous updating (see, e.g. Emens at Col. 1: 29 – 63). Instead of using user profiles to identify target advertisements, Emens uses search result items produced by a search engine performing a user-initiated Internet search to provide the necessary information for selecting

targeted ads (see, e.g., Emens at Col. 4: 54-58.) The search results of Emens include summary (abstract) information with key words that have current relevance to the user, and that can be readily matched to target advertisements (see, e.g., Emens at Col. 5: 20 – 43). No additional information about the user and/or his or her interests is needed.

In the Advisory Action of May 11, 2009, the Examiner argues that “modifying Emens to incorporate [Herz’s] teachings will produce a system wherein the user uses a URL instead of keywords to retrieve the content.” As previously argued in Appellants’ Reply Brief of September 17, 2007, Appellants submit that modifying Emens with the addition of Herz to eliminate use of keywords to retrieve content would frustrate and negate Emens’ purpose of providing an advertisement-enhanced user-directed search engine, as no user-directed searches would then be possible. In addition, such a modification would erode the benefits taught by Emens of providing a system that requires no user-specific information, and thereby, no maintenance and updating of user-specific information.

In the February 25, 2009 Office Action, the Examiner provided the following argument in support of combining Emens and Herz:

It would have been obvious to a person of ordinary skill in the art at the time of Applicant’s invention to have replaced Emens[’] keyword search with the teaching of Herz of the content being accessed in response to the submission of a URL by the user because such a motivation would avoid **unwanted articles in an irrelevant or unexpected context** (Herz, col. 2, lines 43-53).

Detailed Action, item 3, page 3 (emphasis in original).

Appellants respectfully disagree. As explained by the Federal Circuit: “[C]onclusory statements such as those here provided do not fulfill the [Examiner’s] obligation’ to explain all material facts relating to a motivation to combine.” *Dystar Textilfarben GmbH & Co. Deutschland KG v. C.H. Patrick Co.*, et al., 464 F.3d 1356 (Fed. Cir. 2006) (quoting *In re Lee*, 277 F.3d 1338, 1344 (Fed. Cir. 2002)). Appellants submit that the Examiner’s conclusory argument lacks sufficient

support. For example, based on the disclosure of Emens at Col. 1: 40 – 54, Appellants submit that one skilled in the art at the time of the present invention would more likely conclude that the system of Herz based on user profile information would increase the likelihood that retrieved articles are irrelevant:

For example, user profiles may contain the information that a particular user is interested in automobiles, particularly in purchasing an automobile. When this Internet user visits various web sites, the user's profile information may be retrieved and advertisement banner ads about automobiles or related products may be instantly displayed.

This approach provides several challenges. First, the user profiles need to be collected and built, which has proven to be cumbersome work. Second, **the information in these user profiles will inevitably change when the interests of a user changes. In the aforementioned example, a user may be no longer interested in buying an automobile simply because he or she has just purchased one. Thus, it is important, yet extremely difficult to ensure these profiles remain current.**

(Emphasis added).

For at least these reasons, Appellants submit that Herz would have failed to suggest to one skilled in the art at the time of the present invention that Emens could be modified in view of Herz to replace keyword searches for content with URL submissions for content, absent Appellants' specification as a roadmap.

Elaboration of Point 3

Even if Emens were combined with Herz, the result would not be the claimed invention, because the combination still fails to teach or suggest displaying the requested content and the targeted ad together in direct response to the submission of the URL.

If combined in the manner suggested by the Examiner, Herz modifies Emens to provide a system that produces content ("search results") with the submission of a URL rather than with the submission of keywords. This is the only way in which Emens is proposed to be modified by Herz.

Therefore, with reference for example to FIG. 3 of Emens, it must be concluded that this combination teaches that the content ("search results") resulting from the submission of the URL are next forwarded to the product matching manager 140 for matching products in the product database to the search results and producing display results, and that the request server 160 then builds a results page to be displayed for the user that includes the search results and a product icon for each search result that was flagged by the product matching manager 140 as having at least one product match.

As a result, and as argued in the Elaboration of Point 1, the suggested combination of Emens and Herz still fails to teach or suggest Appellants' claimed matchmaker that, upon receipt of a URL specifying information content requested by a user, **directly sends a targeted ad to the station for display with the content** without any further action being required by the user. In sharp contrast to the claimed invention, the combination of Emens and Herz instead requires that the user first receive the content (i.e., the search result page), and then click on one of the product icons presented on this page in order to receive a secondary display page including a list of the one or more products associated with the selected product icon. In other words, and in sharp contrast to the claimed invention, the combination of Emens and Herz does not teach the simultaneous display of a targeted ad together with the content.

For at least the reasons described in relation to the above three points, Appellants submit that independent claims 15, 18, 21 and 89 are not made obvious in view of the combination of Emens and Herz, and stand in condition for allowance. Claims 16 and 27-39 depend from claim 15. Claims 22 and 40-88 depend from claim 21. Appellants submit that claims 16 and 22-88 are also allowable for at least the same reasons as their respective base claims.

Grounds of Rejection No. 2

Appellants submit that claim 36 is patentable over the combination of Emens and Herz and the Examiner's Official notice for at least the following reasons.

The Examiner contends that Emens and Herz disclose most of the features of claim 36. However, the Examiner acknowledges that Emens and Herz does not disclose that content is classified by past consumption by users as a consequence of ads that were received and responded to by them. The Examiner states that this feature is “old and well known in the computer related arts,” and that it would have been obvious for a person of ordinary skill in the art to have combined Emens, Herz, and the Examiner’s statement of what is “old and well known” at the time of the invention to achieve the invention of claim 36.

First, the Examiner’s statement that it is “old and well known to classify information [content as would be extracted by the claimed match maker for classification according to a channel] related to past consumption of prior products or coupons redemption by the consumer . . .” is not supported by any concrete evidence in the record. (*See* MPEP § 2144.03(C), *citing In re Zurko*, 258 F.3d 1379, 1386 (Fed. Cir. 2001) (“[T]he Board [or examiner] must point to some concrete evidence in the record in support of [findings based on personal knowledge]” to satisfy the substantial evidence test).) Accordingly, Appellants first submitted a request in an Amendment of April 11, 2007 that the Examiner support this personal knowledge with affidavits containing data as specific as possible pursuant to 37 C.F.R. §1.104(d)(2). In accordance with § 1.104(d)(2), Appellants are permitted to contradict or further explain such affidavits in order to overcome an obviousness rejection made at least in part on the basis of Official Notice. To date, the Examiner has not provided any affidavits in support of this personal knowledge.

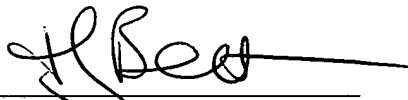
Appellants submit that without further supporting evidence, the Examiner has impermissibly relied on personal knowledge and, thus, has not met the burden necessary to establish a *prima facie* case of obviousness for claim 36 based on Emens, Herz and the Examiner’s Official Notice. Moreover, and as argued above in reference to the Grounds of Rejection No. 1, claim 36 is not obvious in view of the combination of Emens and Herz.

CONCLUSION

For all of the reasons set forth above, the rejections of claims 15, 16, 21, 22 and 27-89 under 35 U.S.C. § 103(a) should be withdrawn. Appellant respectfully requests that the application be remanded to the Primary Examiner with an instruction to withdraw the rejections, and pass the case to allowance.

Respectfully submitted,

Dated: August 5, 2009

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APPENDICES

VIII. CLAIMS APPENDIX

The following is a copy of the claims involved in the appeal:

1. (Withdrawn) A method for presenting to a user at a station connected to a distributed computer network, relevant areas of distributed computer network sites, comprising, the steps of:

receiving across the distributed computer network an indication of a mind set of the user in navigating the network, wherein the mind set indicates a navigational goal of the user over the distributed computer network;

cross-referencing the indicated user mind set with a mind set data store of potential user goals to find at least one indicated goal;

cross-referencing the indicated user goal with a service data store of a set of services, the set of services potentially reflecting the navigational goal of the user mind set;

matching the set of services in the cross-referencing step with a list of service providers that provide the set of services that potentially reflect the navigational goal of the user; and,

displaying the list of services and service providers to the user at the station.

2. (Withdrawn) A method as in claim 1, further comprising, the step of:
offering the user a promotion associated with a service provider that relates to the received user mind set.

3. (Withdrawn) A method as in claim 1, wherein the displaying step, further comprises, the step of:

 sending the list to a tool that creates a user interface for the constructed list.

4. (Withdrawn) A method as in claim 1, wherein the station is at least one of a personal computer, a pager, a Web-enabled phone, a personal digital assistant (PDA), a pen-based platform, a wireless digital platform, and a voice-based platform.

5. (Withdrawn) A method for presenting to a user at a station connected to a distributed computer network, relevant areas of distributed computer network sites, comprising, the steps of:

 displaying to the user across the distributed computer network a set of potential user mind sets and a set of potential contextual inferences;

 receiving from the user at least one of a user mind set or a contextual inference, wherein the user mind set or contextual inference indicates a navigational goal of the user over the distributed computer network;

 sending the user to a new location on the distributed computer network in response to the received user response; and,

 presenting to the user at the station a list of service providers in response to the received user response, the list of service providers providing services in accordance with the received user response.

6. (Withdrawn) A method as in claim 5, further comprising, the a step of:

outlining an activity history that reflects the received user response on a visual display at the station.

7. (Withdrawn) A method as in claim 6, further comprising, the step of:
recording the activity history electronically.
8. (Withdrawn) A method as in claim 7, further comprising, the step of:
transmitting the electronically stored activity history.
9. (Withdrawn) A method as in claim 8, further comprising using the transmitted electronically stored activity history for a customization of a navigational environment.
10. (Withdrawn) A method as in claim 5, further comprising, the step of:
offering the user an additional enhancement wherein the additional enhancement comprises a promotion associated with a service provider that relates to the received user response.
11. (Withdrawn) A method as in claim 5, wherein the station is at least one of a personal computer, a pager, a Web-enabled phone, a personal digital assistant (PDA), a pen-based platform, a wireless digital platform, and a voice-based platform.
12. (Withdrawn) A method as in claim 5, further comprising, the step of:
generating a fee to the service provider each time a service associated with the service provider is presented to the user.
13. (Withdrawn) A method as in claim 5, further comprising the step of:

receiving from the user a selection from the list, the selection being consistent with the navigational goal of the user over the distributed computer network.

14. (Withdrawn) A method as in claim 13, further comprising the step of:

generating a fee to a service provider each time a user selection associated with the service provider is received from the user.

15. (Previously Presented) A system for delivering ads to a user viewing content operating a station connected to a distributed computer network, comprising:

an ad server which maintains the ads for the user at the station across the distributed computer network, the user station allowing the user to retrieve information containing content;

a data store containing a set of relevancy rules associated with each ad, the rules being operable to indicate a level of relevancy of the ad to the content of the information retrieved;
and

a match maker configured to, in response to the submission of a URL by the user at the operating station, access the content retrieved by the user, extract the content according to extracting rules, parse the content of the information into objects, target an ad from the server to the content by applying the relevancy rules in the data store to the objects, free of information about the user, and directly send the targeted ad to the station for display with the content.

16. (Previously Presented) A system as in claim 15, wherein the station is at least one of a personal computer, a pager, a Web-enabled phone, a personal digital assistant (PDA), a pen-based platform, a wireless digital platform, or a voice-based platform.

17. (Withdrawn) A system for sending targeted services to a user at a station connected to a distributed computer network, comprises:

an object registry that identifies a first set of objects relevant to services provided by a service provider and that maps the first set of objects to the services provided by the service provider; and,

a match maker that parses content in a document, that identifies a second set of objects relevant to the content, that groups the second set of objects relevant to the content, that cross references the first set of objects with the second set of objects to determine targeted services relevant to both the first and the second set of objects, and that sends the targeted services to the user across the distributed computer network.

18. (Withdrawn) A system as in claim 17, wherein the station is at least one of a personal computer, a pager, a Web-enabled phone, a personal digital assistant (PDA), a pen-based platform, a wireless digital platform, and a voice-based platform.

19. (Withdrawn) A system for presenting to a user at a station connected to a distributed computer network, relevant computer network sites, comprising:

a mind set data store that stores a set of potential user goals;

a service data store that stores a set of services; and,

a processor that receives from the user an indication of a user mind set in navigating the network, wherein the mind set indicates a navigational goal of the user over the distributed computer network, the processor cross references the indicated mind set with the potential user

goals in the mind set data store, cross references the indicated user goal with the set of services potentially reflecting the navigational goal of the user, matches the set of cross referenced services with a list of service providers that provide that set of services, and displays the list of services and service providers to the user at the station.

20. (Withdrawn) A system as in claim 19, wherein the station is at least one of a personal computer, a pager, a Web-enabled phone, a personal digital assistant (PDA), a pen-based platform, a wireless digital platform, and a voice-based platform.

21. (Previously Presented) A method for presenting to a user, viewing content at a station connected to a distributed computer network, relevant areas of distributed computer network sites comprising the steps of:

maintaining ads for the user at the station across the distributed computer network, the user station allowing the user to retrieve information containing content;

identifying a set of relevancy rules which are used for indicating a level of relevancy of each ad to the content of the information retrieved;

accessing, in response to the submission of a URL by the user at the operating station, the information retrieved by the user;

extracting the content of the retrieved information according to a set of extracting rules;

parsing the content of the information into objects;

targeting the ads to the content by applying the relevancy rules to the objects, free of information about the user; and

displaying the targeted ads at the station with the content.

22. (Previously Presented) A method as in claim 21 wherein the station is at least one of a personal computer, a pager, a Web-enabled phone, a personal digital assistant (PDA), a pen-based platform, a wireless digital platform, and or a voice-based platform.

23. (Withdrawn) A method for presenting to a user at a station connected to a distributed computer network, relevant areas of distributed computer network sites, comprising, the steps of:

identifying a first set of objects relevant to services provided by a service provider;

mapping the first set of objects to the service provided by the service provider;

parsing a second set of objects relevant to content in a document;

grouping the second set of objects relevant to content in a document;

cross referencing the first set of objects with the second set of objects to determine targeted services; and

sending targeted services to the user across the distributed computer network.

24. (Withdrawn) A method as in claim 23, wherein the station is at least one of a personal computer, a pager, a Web-enabled phone, a personal digital assistant (PDA), a pen-based platform, a wireless digital platform, and a voice-based platform.

25. (Withdrawn) A method as in claim 23, further comprising the step of:

generating a fee to the service provider associated with the sent targeted service.

26. (Withdrawn) A method as in claim 23, further comprising the step of:
receiving from the user a user selection.
27. (Previously Presented) A system as in claim 15, wherein the targeted ad is presented to the user in at least one of static text, Hyper Text Markup Language, image, Flash, and or rich media format.
28. (Previously Presented) A system as in claim 15, wherein an advertiser has purchased a right to advertise the targeted ads maintained by at least one of the ad server, an ad network, and or an affiliate network.
29. (Previously Presented) A system as in claim 15, wherein the objects parsed by the match maker are at least one of a keyword, a key phrase, or a structural relationship of at least one of multiple keywords, multiple key phrases, a keyword with a key phrase, or multiple keywords with multiple key phrases.
30. (Previously Presented) A system as in claim 29, wherein said at least one key word, a key phrase, and or structural relationship was purchased by an advertiser for targeted advertising.
31. (Previously Presented) A system as in claim 15, wherein the relevancy rules relate to at least one of a keyword, a key phrase or a structural relationship of at least one of multiple keywords, multiple key phrases, a keyword with a key phrase, or multiple keywords with multiple

key phrases that was purchased by an advertiser for targeted advertising and wherein the data store stores a price at which said at least one key word, key phrase, or structural relationship was purchased or a performance measurement of the targeted ad associated with the purchased at least one key word, key phrase, or structural relationship.

32. (Previously Presented) A system as in claim 31, wherein performance is measured by at least one of changes in revenues or click through rates of targeted ads.

33. (Previously Presented) A system as in claim 15, wherein the content is a portion of content from a location on the distributed computer network that the user requested to view.

34. (Previously Presented) A system as in claim 15, wherein the content is a portion of content from a location on the distributed computer network that the user requested to receive.

35. (Previously Presented) A system as in claim 15, wherein the extracting rules enable a classification of the content according to a channel, and wherein a channel is one of an object, a group of objects, a classification of objects or a structural relationship among objects.

36. (Previously Presented) A system as in claim 35, wherein the channel into which the content is classified is related to past consumption by users as a consequence of ads that were received and responded to by them.

37. (Previously Presented) A system as in claim 35, wherein the channel into which the content is classified is among channels used for existing advertising sales by at least one of an advertiser, an ad network, or an affiliate network.

38. (Previously Presented) A system as in claim 15, wherein the match maker parses the content and maps to the targeted ad in real time as the user operates at the station connected to the distributed computer network.

39. (Previously Presented) A system as in claim 15, wherein the match maker parses the content and maps to the targeted ad prior to the user operating at the station connected to the distributed computer network.

40. (Previously Presented) The method of claim 21, wherein the targeted ads belong to an advertiser, and wherein identifying the set of relevancy rules comprises receiving a list of topics from the advertiser.

41. (Previously Presented) The method of claim 21, wherein targeting the ads comprises generating a list of topics by analyzing the content of the information retrieved.

42. (Previously Presented) The method of claim 21, wherein parsing the particular media content comprises identifying a set of one or more topics by calculating a level of relevancy to the content based on text within the content of the information retrieved.

43. (Previously Presented) The method of claim 42, wherein terms in the set of relevancy rules are assigned relevancies based on a frequency with which the terms appear in the text of the content of the information retrieved.

44. (Previously Presented) The method of claim 42, wherein terms in the set of relevancy rules are assigned the level of relevancy based on an infrequency with which the terms appear across a collection of ads.

45. (Previously Presented) The method of claim 42, wherein the set of one or more topics contains terms whose level of relevancy exceeds a defined threshold.

46. (Previously Presented) The method of claim 42, wherein the set of one or more topics includes a defined number of terms with the highest level of relevancy among the terms of the set of relevancy rules.

47. (Previously Presented) The method of claim 21, wherein parsing the content of the information retrieved comprises identifying a topic based on other portions of a collection of which the content is a part.

48. (Previously Presented) The method of claim 21, wherein parsing the content of the information retrieved comprises identifying a topic based on one or more queries that yield a reference to a targeted ad.

49. (Previously Presented) The method of claim 21, wherein the step of parsing the content of the information retrieved comprises:

determining at least one document similar to the content;

supplementing the content of the information retrieved with the content of the similar document; and

analyzing the supplemented content of the information retrieved to identify a topic.

50. (Previously Presented) The method of claim 49, wherein determining at least one similar document comprises determining that a document is similar if it contains a reference to the content of the information retrieved.

51. (Previously Presented) The method of claim 49, wherein determining at least one similar document comprises determining that a document is similar if the content of the information retrieved contains a reference to the document.

52. (Previously Presented) The method of claim 49, wherein supplementing includes replacing at least a portion of the content of the information retrieved with at least a portion of the content of the at least one similar document.

53. (Previously Presented) The method of claim 21, wherein step of parsing the content of the information retrieved comprises:

identifying a description of the content used by another document that references the content; and

analyzing the content of the description to identify a topic for the content of the information retrieved.

54. (Previously Presented) The method of claim 21, wherein the step of parsing the content of the information retrieved comprises:

identifying a description of the content used by another document that references the content;

supplementing the content of the information retrieved with the description; and

analyzing the supplemented content to identify a topic for the content of the information retrieved.

55. (Previously Presented) The method of claim 21, wherein parsing the content of the information retrieved comprises:

classifying the content into a category; and

identifying a list of one or more topics for the content of the information retrieved based on the category.

56. (Previously Presented) The method of claim 55, wherein meta-information associated with the content of the information retrieved is used to classify the content into a category.

57. (Previously Presented) The method of claim 56, wherein the meta-information includes information from another document that contains a reference to the content of the information retrieved.

58. (Previously Presented) The method of claim 56, wherein the meta-information includes information from another document to which the content refers.

59. (Previously Presented) The method of claim 58, wherein the information from another document includes meta-information associated with the other document.

60. (Previously Presented) The method of claim 21, wherein parsing the content of the information retrieved comprises comparing the content to a topic or a related topic to determine if a match exists between the topic or a related topic and the content of the information retrieved.

61. (Previously Presented) The method of claim 53, wherein the related topic is a synonym of the topic.

62. (Previously Presented) The method of claim 53, wherein the related topic is conceptually similar to the topic.

63. (Previously Presented) The method of claim 21, wherein the content is a retrieved web page.

64. (Previously Presented) The method of claim 63, wherein parsing the content of the information retrieved comprises: analyzing terms within the web page and including the terms in the

set of one or more topics if a frequency with which terms appear in the web page exceeds a threshold value.

65. (Previously Presented) The method of claim 64, wherein terms that are related to one or more topics in the set are determined and supplemented so as to include the related terms.

66. (Previously Presented) The method of claim 64, wherein parsing the content comprises analyzing terms within a title of the web page and including the terms in the set of one or more topics if the frequency with which terms appear in the title exceeds a threshold value.

67. (Previously Presented) The method of claim 64, wherein the step of parsing the content of the information retrieved comprises:

targeting ads for the web page based on text within the web page; and
identifying a set of one or more topics based on a relevancy level.

68. (Previously Presented) The method of claim 67, wherein terms in the ads are assigned the level of relevancy based on a frequency with which the terms appear in the content of the information retrieved.

69. (Previously Presented) The method of claim 67, wherein terms in the targeted ad are assigned the level of relevancy based on the infrequency with which the terms appear across a collection of web pages.

70. (Previously Presented) The method of claim 67, wherein the set of one or more topics includes terms whose level of relevancy exceeds a defined value.

71. (Previously Presented) The method of claim 67, wherein the set of one or more topics includes a defined number of terms with the highest level of relevancy among the terms of the targeted ad.

72. (Previously Presented) The method of claim 64, wherein the step of parsing the content comprises:

determining at least one similar web page to the retrieved web page;

revising the content of the retrieved web page by supplementing it with the content of the similar web page; and

analyzing the revised content of the retrieved web page to identify a set of one or more topics.

73. (Previously Presented) The method of claim 72, wherein supplementing includes replacing at least a portion of the retrieved web page content with at least a portion of the similar web page content.

74. (Previously Presented) The method of claim 72, wherein determining at least one similar web page comprises determining that a web page is similar if it contains a link to the retrieved web page.

75. (Previously Presented) The method of claim 72, wherein determining at least one similar web page comprises determining that a web page is similar if the retrieved web page contains a link to the similar web page.

76. (Previously Presented) The method of claim 72, wherein the web page is contained in a host, and wherein determining at least one similar web page comprises determining that a web page is similar if it is contained within the same host as the retrieved web page.

77. (Previously Presented) The method of claim 72, wherein the web page is contained in a host, and wherein determining at least one similar web page comprises determining that a web page is similar if it is stored within a subdirectory of related pages on the same host as the retrieved web page.

78. (Previously Presented) The method of claim 64, wherein the step of parsing the content of the information retrieved comprises:

determining anchor text corresponding to the retrieved web page;

revising the content of the retrieved web page by supplementing it with the anchor text; and

analyzing the revised content of the retrieved web page to identify a set of one or more topics.

79. (Previously Presented) The method of claim 78, wherein supplementing includes replacing at least a portion of the retrieved web page content with at least a portion of the anchor text.

80. (Previously Presented) The method of claim 78, wherein supplementing includes replacing the retrieved web page content with at least a portion of the anchor text.

81. (Previously Presented) The method of claim 64, wherein the step of parsing the content comprises:

classifying the retrieved web page into a category; and

identifying a list of one or more topics for the retrieved web page based on the category.

82. (Previously Presented) The method of claim 81, wherein meta-information associated with the retrieved web page is used to classify the retrieved web page into a category.

83. (Previously Presented) The method of claim 82, wherein the meta-information includes information from another document that contains a reference to the retrieved web page.

84. (Previously Presented) The method of claim 82, wherein the information from another document includes meta-information associated with the other document.

85. (Previously Presented) The method of claim 82, wherein the meta-information includes anchor text corresponding to the retrieved web page.

86. (Previously Presented) The method of claim 64, wherein the advertisement belongs to an advertiser, and wherein identifying targeting information comprises receiving a set of one or more topics from the advertiser.

87. (Previously Presented) The method of claim 64, wherein identifying targeting information comprises applying the relevancy rules in the data store to one or more topics based on the objects parsed from the content.

88. (Previously Presented) The method of claim 64, wherein identifying targeting information comprises generating a set of one or more topics for the advertisement based on text of queries on a search engine that yield a result that links to a web page on a web site to which the advertisement links.

89. (Previously Presented) A system for delivering ads to a user operating a station connected to a computer network, to retrieve and view information containing content comprising:

a server for storing the ads for delivery to the user operating the station connected to the computer network;

a memory containing a set of relevancy rules associated with an ad, said relevancy rules being operable to indicate a level of relevancy of the ad to the content of the information; and

a module configured to, in response to the submission of a URL by the user at the operating station, access the information retrieved by the user as a result of submitting the URL, extract the content from the information based on extracting rules, parse the content into objects and corresponding attributes, group objects with associated attributes, target an ad to the content by

applying the relevancy rules in the memory to the grouped objects and attributes, free of information about the user, and directly send the targeted ad to the station for simultaneous display with the content.

IX. EVIDENCE APPENDIX

1. U.S. Patent Application No. 10/001,772 to Subramanian et al.
2. U.S. Patent No. 5,835,087 to Herz et al.
3. U.S. Patent No. 7,076,443 to Emens et al.

X. RELATED PROCEEDINGS APPENDIX

There are no known related proceedings for this matter.

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AMENDMENTS TO THE SPECIFICATION

Please amend the Specification pursuant to 37 C.F.R. § 1.121 as follows:

On page 1, line 1, please amend the title as follows:

-- INTERNET CONTEXTUAL ~~COMMUNICATION~~ ADVERTISEMENT DELIVERY
SYSTEM AND METHOD--

Application Serial No. 10/001,772

Docket No.: 03485/100H79-US1

AMENDMENTS TO THE SPECIFICATION

On page 5, bridging page 6, please delete the last paragraph and replace with the following:

--Further, online companies spend vast sums placing advertisements on the Internet, which advertisements have poor responses because they are most often viewed by a person on the Internet at a time when they are not particularly relevant to the mind set of the user at the time, i.e., the goal of the user in being on the Internet in the first place. In order to improve the situation, online ~~retailer~~ retailers utilize performance based marketing methods, e.g., the affiliate marketing programs that compensate the affiliate based on performance, that is, for example the number of customers that are directed to the site from the affiliate site. However, as noted, these companies have to spend vast amounts of money and effort to ensure that the affiliate sites maintain current and up to date links, in order to use the affiliate sites as a vehicle for providing timely promotions to users. The performance of both online advertising and online affiliate marketing would increase significantly if the advertisements and the affiliate links were automatically targeted to the current interest or mind-set of the user.--

On page 19, please delete the first paragraph and replace with the following:

--In order to create CVC's that are accurate and take maximal advantage of the services and providers that exist, there must be processes to keep the Registries current and also to grow their size to accommodate new services and providers over time. The maintenance is accomplished by a collection of independent processes involving the Mind-set Registry, the Services Registry, one or more Registry Editors, and the community of users and service providers. The following is a description of these processes as illustrated in **Figure 4**[[[:]]:--

On page 22, please delete the second paragraph and replace with the following:

--Finally, the user may consider another similar computer, e.g., the user may select the VAIO PCV-R532DS from the pick list in the Context Bar. Then he clicks the "Reviews" service to see reviews of this model. This causes the browser to jump back to CNET, again deep navigating to the appropriate page containing a review for that computer (**Figure 9**). Also the activity history 72 on the right reflects that the user has now reviewed two computers. If the user wants to jump back to the review for the other computer, he can click on the PCV-J100 in that activity history tree.--

On page 27, bridging 28, please delete the second paragraph and replace with the following:

1. The user 10 starts browsing the Internet and comes across an A/A Site 122 that has a contextual advertisement or affiliate link embedded in it.

2. As the user browses, the server which hosts the A/A Site 122, ~~which serves the affiliate link.~~ It sends the content of the page the user is viewing to the CSP 120 Match Maker 30'.

3. The CSP Match Maker 30' parses the content of the page that the user is viewing and identifies the objects and their attributes which are mentioned on the page. The CSP 120 Match Maker 30' intelligently groups together the attributes belonging to a particular object. For example, a page may mention[[s]] several computers and for each computer, it may mention attributes such as brand, processor type, and processor speed. The CSP Match Maker 30' will group together the attributes belonging to each computer object and produce a list of computer objects found on the page.

4. The CSP Match Maker 30' then cross-references the objects that are found with the Rules Registry 100 to determine the set of contextual advertisements or affiliate links that are relevant to the current content. The CSP Match Maker 30' returns this set to the Advertisement Server or Affiliate Site 122.

5. The A/A Site 122 may also apply additional rules, such as user demographics, to pick a particular advertisement or affiliate link if more than one is returned by the ~~CSP-120~~ Match Maker 30'.

67. The A/A Site provides the user with the contextual advertisement or affiliate link.

78. The user 10 views the contextual advertisement or affiliate link and clicks on it if he or she is interested in the information shown. Clicking on the advertisement or affiliate link makes a call to the Service Provider 16 asking for the content of that particular advertisement or affiliate link.

89. The Service Provider 16 serves up the appropriate content to the user.--

EXPRESS MAIL CERTIFICATE

Date 10/31/01 Label No. E767726111US

I hereby certify that, on the date indicated above, this paper or fee was deposited with the U.S. Postal Service & that it was addressed for delivery to the Assistant Commissioner for Patents, Washington, DC 20231 by "Express Mail Post Office to Addressee" service.

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Name (Print) D B Peck

Signature [Signature]

3485/1H799US1

INTERNET CONTEXTUAL COMMUNICATION SYSTEM

CROSS-REFERENCE TO RELATED APPLICATIONS

This application claims the benefit of provisional U.S. Patent Application Serial No. 60/244,725 entitled "INTERNET NAVIGATION TOOL," filed October 31, 2000, provisional U.S. Patent Application Serial No. 60/296,599 entitled "CONTEXTUAL ADVERTISING AND AFFILIATE MARKETING" filed on June 7, 2001, and provisional U.S. Patent Application Serial No. 60/296,590 entitled "CONTEXTUAL CUSTOMER-RETENTION TOOL & NETWORK" filed on June 7, 2001, the disclosure of all of which are incorporated herein by reference in its entirety.

BACKGROUND OF THE INVENTION

The present invention relates generally to providing content, services and advertising about services by means of the Internet and, more particularly, to bringing to

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customers various services, content, advertising about services and affiliate links that are automatically determined to be relevant to the customer's current interest on the Internet.

Two large-scale and complementary problems have emerged in the online world. First, it is increasingly difficult for users to find the online content and services that suit their needs in real time. Second, it is increasingly difficult for online service providers to make it easy for targeted customers to find their offerings that would be useful to the customer at the current moment. Both of these problems are a function of the current size and exploding growth of the Internet. An ideal solution would allow users to focus on what they want, allow service providers to focus on what they offer, and alleviate the effort currently required on both sides to find each other.

A typical company with a presence on the Internet, makes available content or some other service at its web site where it can be accessed automatically or semi-automatically by a group of consumers or users. For example, headline news is a content-based service made available by companies like CNN, NBC, the BBC, the Associated Press, and so on. These are available "online" via traditional web browsers by users who visit the appropriate company's web site. Also book-selling is another service provided by service provider companies like Amazon.com, Barnesandnoble.com, 1BookStreet.com, and so on, which provide for the sale of books, music and electronics. These web sites may also provide professional and customer reviews of the products.

The users interact with the services at a web site via a personal computer running a web browser application (such as Microsoft Internet Explorer or Netscape Navigator). This user might also access such services via other means, such as from a personal digital assistant (PDA),

wireless digital telephone, a traditional telephone by voice commands, and so on. In addition, service providers can also introduce such services directly, such as through e-mail or instant messaging. Ultimately through any combination of these and other means, the user accesses some such service.

5 Some service providers aggregate services on their web site to form a “value chain,” i.e., a group of related services and content. This is done in order to capture as much of the user’s attention as possible. Such value chains develop because online services are created and evolved with great speed on the Internet, and some of these service providers develop relationships with each other in complex networks based on the applicability of the service of one provider to the services of other provider. The traditional notion of a “value chain” is a path through these related services that brings a collection of items or services of value to a user. One way a user experiences a value chain is through a single trusted service provider that aggregates other relevant services, such that a complete value chain is present at that provider’s site. Users can also create their own value chain ad hoc through search engines.

10
15 **Figure 1** shows a prior art navigational experience for a user by which a potential customer 10 with a personal computer running a browser uses a communications system 12 to access the Internet 14. The user makes contact with a web site 16, which may provide links to other services at that site or other sites 18 to form a value chain. For example, access to the Amazon.com site provides the customer with the following services relevant to the book purchase process:

- Book search by title, author, subject, ISBN
- Book excerpts

- Reviews by experts
- Reviews by customers
- Related books listings
- Book pricing and purchase capability

5

By aggregating these services, Amazon offers to its users that selection of services which it believes will likely be most relevant to its customer's goal in visiting its online bookstore. It also provides links to other web sites that Amazon believes will be of interest to all visitors to its site. This pattern of user-to-services interaction established by the web site is illustrated in the model in Figure 2.

In Figure 2, also a prior art approach, the user 10, via a telecommunications line 12 connects through the Internet 14 to the preferred service provider's web site 16, i.e., Amazon.com. At the web site, the user is provided access to a number of relevant services 21-24, designated V1-V4, that compose a value chain 16. Each service 21-24 may be selected by the user by operation of his or her browser. These services can be at the site or accessed through links to other sites 25-28 which provide services, or even related value chains, e.g., A9, the service, at site 28, the value chain.

However Amazon cannot provide similar value to users in the general case, i.e., when they are not at Amazon, when they are not looking for a product Amazon sells, when they are not shopping for a product at all, and so on. In particular, there is no current notion of a value chain that is not owned and operated by a particular site-based e-business.

As another example, a consumer looking to buy a particular stock at E*Trade.com might want to see charts from BigCharts.com, SEC filings from Edgar.com, discussion forums from Yahoo.com, insider trading from InsiderTrading.com and Press/News Capsules from Bloomberg.com. In this example, no fewer than six different service providers (perhaps each with their own value chain) can add value to a user's purchasing decision or goal. In order for any of these services to add value in that decision, either the user has to know about them in advance or E*Trade has to integrate all of this content on its site. Similarly, in order for E*Trade to get access to this consumer, either the user has to know about E*Trade and decide to visit, or E*Trade has to manage affiliate relationships with the other service providers in this value chain so they will have links on their sites to E*Trade. It is difficult to negotiate, setup and manage on a real time basis such relationships.

This "web" of services as illustrated in Figure 2, includes tremendous volumes of valuable information and services, yet users of these services are burdened with the significant difficulty of finding those select services that are complementary to their current goal. Thus, the architecture of the Internet is a significant burden to both users looking for consumer services and the providers of those products over the Internet. There is a need to address this fundamental problem by providing a way for users and service providers to find each other when and where they are most needed.

Further, online companies spend vast sums placing advertisements on the Internet, which advertisements have poor responses because they are most often viewed by a person on the Internet at a time when they are not particularly relevant to the mind set of the user at the time, i.e., the goal of the user in being on the Internet in the first place. In order to improve the

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situation, online retailer utilize performance based marketing methods, e.g., the affiliate marketing programs that compensate the affiliate based on performance, that is, for example the number of customers that are directed to the site from the affiliate site. However, as noted, these companies have to spend vast amounts of money and effort to ensure that the affiliate sites maintain current and up to date links, in order to use the affiliate sites as a vehicle for providing timely promotions to users. The performance of both online advertising and online affiliate marketing would increase significantly if the advertisements and the affiliate links were automatically targeted to the current interest or mind-set of the user.

Much of the online advertising industry attempts to target users based on user demographics or perceived product preference. Certain sites, e.g., major search engine sites, advertisers also attempts to target user by keyword-based targeting. However, this type of marketing does not capture the opportunity to present a product that is in-line with a user's current goal. Just because a particular consumer enjoys rock music, does not mean that at the time when they are looking to buy a computer, they have an interest in seeing an advertisement about a CD for the latest music group. Even if the user is currently searching for information within a particular general subject, that does not mean they have an interest in an advertisement about the subject that does not address their particular interest. For example, Hilton hotels might choose to advertise on an affiliate travel site in order to present their promotions to users who are planning to travel. However, if the promotion is a discount for Hilton hotels in San Francisco, and a particular user is planning to travel to Los Angeles, then there is not an exact match between the promotion and the user's goal and a potential opportunity to make a sale is lost, assuming that Hilton Hotels has a promotion for a stay in Los Angeles. Thus there is a need for

advertisers and affiliate sites to be able to serve contextually targeted advertisement and affiliate links to users that encompass the complete or detailed mind-set of the customer.

In addition to trying to attract new customers, online service providers also spend much of their marketing dollars in an effort to reach previous customers who like their service, but who later either forget about those services, cannot find them again, or do not appreciate that the service is relevant to their current activity. With the Internet's exploding growth it is extremely frustrating for customers to try to keep track of all the various services that are available to them and to remember which service providers they liked the most. While more modern browsers provide "Favorites" or "Bookmarks" for retaining information that allows quick access to sites, the user must 1) at the time of the visit to the site request the URL of the site to be stored 2) organize those bookmarks in such a way that they are organized optimally. Unless, the user remembers the Bookmark and recalls to use it while making a relevant search, the information can be lost. Thus, the Internet is not designed to provide ways for companies to reach prior customers at points of need and it does not facilitate alerting past customers to new services provided by the company.

As an example, take a consumer who reads a useful review on a particular computer at Cnet.com. At some later date the consumer is interested in purchasing a Compaq computer and goes to Compaq.com. The consumer would like to read a review about the computer. However, if Compaq does not have reviews or the customer does not want to rely on Compaq's reviews, and the consumer does not remember the name of the review site previously visited, Cnet.com loses the opportunity to have a repeat customer and the consumer does not get the value of reading the review. Thus there is a need for a way for companies to provide their

customers with contextual, deep-navigated links back to their services when it is most relevant to the customer.

These problems that exist on the Internet also exist as a microcosm within individual organizations and enterprises. For example, many organizations, especially those relatively larger and older companies, own a variety of computer systems each of which performs a set of functions and which communicates with a number of other such computer systems. These systems are often built on heterogeneous technologies, making the collaboration among them more difficult to implement and more brittle to change once implemented. There exists prior art related to the process of creating a homogenous communication infrastructure on which these various systems can more fluidly collaborate, this in the industry is called the space of Enterprise Application Integration (EAI). However the technology solutions in the EAI space still leave an important problem unsolved: how to enable users to navigate among these many services effectively.

An example of this problem is integrating an effective customer relationship management practice into a business, especially on a large scale. Often a customer's order processing takes place in one system, billing in another, customer service in another, and new product promotions and sales calls in yet another system. The first problem is enabling these various systems to communicate, which primarily is the space of EAI technologies. The problem that remains in addition is how, for example, to enable a user entering a customer-service ticket to navigate seamlessly in real time to that customer's order history, bill-paying patterns, responses to sales solicitations, and other appropriate services in the enterprise, without overhauling all those systems as a complete EAI implementation often requires.

This invention, pertaining to a contextual communication system in general, is just as applicable to private Intranets and other proprietary technology system integrations as it is to the Internet on the whole.

5 SUMMARY OF THE INVENTION

The present invention is directed to a system and method that connects relevant services, content, advertising and affiliate links around the user's navigational goal in navigating the Internet. The navigational scheme of the present invention is content based.

10 In an illustrative embodiment, the system is an electronic companion, manifested as a browser plug-in or as a complete web-browser application, adapted to understand or infer the user's current goal based on his navigation of the Internet (or of his private intranet) with the browser, also known as content-based navigation. It can dynamically bring together links to many other services relevant to achieving that goal. As a result, these other services are one click away from the user's current web location. The system then facilitates the user's interaction with these
15 other services in order to allow the user to progress toward his goal. By virtue of being goal-oriented, the invention simultaneously provides a powerful new way for service providers to reach targeted users, i.e., a single place to reach users based on their mind set rather than location on the Internet.

20 The browser plug-in or other implementation of the system of the present invention is set up with contextual value chains that are not site specific. Instead, they are collections of logical service that the system operator has determined are related to a wide variety of Internet navigational goals as well as an understanding of the many sites that provide each such

service. This determination may be based on the system manager's independent assessment or on affiliate relationships. The contextual value chain is supported by "context inference" which allows the browser to infer the goal of the user from the URL from keywords that appear in the content of web pages and the structural relationship of these keywords, and/or from search terms that the user plugs in, and to suggest that goal to the user for selection. If the user selects one of the suggested goals, they are diverted to the value chain which has been established in the system. In addition, the system can generate income for its operator based on "context marketing" in which the opportunity to market products and services may be directed to users based on the goal of their Internet navigation as inferred by the context of their activity.

The present invention allows companies to provide contextually targeted advertisements and affiliate links to Internet and Intranet users. Because the invention enables a contextual understanding of a customer's current online activities and of the objects on the page the customer is currently viewing, a company participating in the system can pick the most contextually relevant advertisement or affiliate link to present to the user. As a result, companies that use the present invention will profit from significantly increasing revenues and click-through rates by establishing a high correlation between the advertisement or affiliate links being served and the user's current mind set. Furthermore, these advertisements and affiliate links can be targeted to the actual product and product characteristics mentioned on the user's browser or the web page the user is currently viewing. This detailed understanding can also enable companies to realize revenues from cross sell and up sell opportunities.

In addition, the technological infrastructure of the present invention creates channels for service providers to reach existing customers at the time and place where they most

need the service(s). In particular, the technological infrastructure not only enables a contextual understanding of a customer's current online activities and of the objects on the page the customer is currently viewing, but it has the ability to automatically link previously visited sites to the relevant value chains. This allows the system to inform the customer of relevant services that the customer has used in the past from a particular service provider, thus improving the service provider's ability to generate repeat consumption of their services by previous online customers.

Companies that utilize the system of the present invention will profit from strengthening their relationships with existing customers by reminding them of their relevant services that have been used in the past. These companies will also increase brand awareness and loyalty by being accessible one click away from anywhere on the Internet. Further, by understanding the context of the customer's Web navigation, these companies can automatically alert customers to new services and changes in existing services when those services would be most useful to the customer's current use of the Internet.

BRIEF DESCRIPTION OF THE DRAWINGS

The foregoing and other features of the present invention will be more readily apparent from the following detailed description and drawings of an illustrative embodiment of the invention in which:

FIGURE 1 is a schematic diagram of prior art Internet navigation;

FIGURE 2 is a schematic diagram of a prior art site specific value chain;

FIGURE 3 is a schematic diagram of the construction of a contextual value chain according to the present invention;

FIGURE 4 is a schematic diagram of the maintenance of registries for a contextual value chain according to an aspect of the present invention;

FIGURES 5-9 are a sequence of illustrations of a user's screen, using one of a multitude of possible user interfaces, while navigating the Internet using the contextual value chain of the present invention;

FIGURE 10 is a schematic diagram of the construction of contextual advertisements and affiliate links according to the present invention;

FIGURE 11 is a schematic diagram of the maintenance of the registry for contextual advertisements and affiliate links according to an aspect of the present invention;

FIGURES 12-13 are illustrations of advertisements targeted towards the content of the page;

FIGURE 14 is a schematic diagram of the construction of a single client's contextual services according to the present invention;

FIGURE 15 is a schematic diagram of the maintenance of the registry for contextual services according to an aspect of the present invention; and

FIGURES 16-19 are a sequence of illustrations of a customer's screen, using one of a multitude of possible user interfaces, while navigating the Internet using the contextual services of the present invention.

DESCRIPTION OF AN EXEMPLARY EMBODIMENT OF THE INVENTION

The *Contextual Value Chain* provided by the system and method of the present invention is designed for offering users a high-value suite of contextual services independent of

the site on the Internet they are visiting. Once it has been set up, providing, the contextual services burdens neither users nor service providers with the maintenance and application of these value chains. The value chain of services may be constructed in real time and/or it can be carried out prior to use.

The present invention may be embodied in part or in whole as a plug-in to the user's web browser; but, it can also have other manifestations. It is made complementary to, or to facilitate the user's current online goal or objective (e.g., a navigational path for information about and the purchase of a product) and as such supports a content-based navigation paradigm.

The system requires a *Services Registry*, which is a data store that identifies a set of unique services known or identified as part of a typical user goal. The registry maps each service to a representative set of known providers of that service. For example, below is a simplified illustration of the concept of a Services Registry:

SERVICE	PROVIDER
Book seller	Amazon.com
Book seller	Barnesandnoble.com
Book seller	1bookstreet.com
Music seller	Amazon.com
Music seller	CDNow.com
Music seller	MP3.com

Electronics reviewer	Cnet
Electronics reviewer	Amazon.com
Electronics reviewer	ZDNet

The system further requires a *Mind-set Registry*, which is a data store that records unique mind set categories – or goals – into which users tend to fall while they are using the services. These mind set categories are derived from the notion that users seek out and use services in order to accomplish a goal; the mind sets of looking to accomplish these goals are what are categorized and recorded in this registry. This registry also maps each goal to a super set of services that tend to be relevant to users looking to accomplish that goal. For example the following is a simplified illustration of the concept of this registry:

GOAL	SERVICE
Buy a computer	Computer seller
Buy a computer	Price comparison engine
Buy a computer	Computer user reviews publisher
Buy a computer	Auctioneer
Buy a computer	Internet Service Provider
See a movie	Movie ticket seller

See a movie	Movie reviewer
See a movie	Movie trailer publisher

5

Note that the Mind-set Registry is also intended to be, but does not need to be, the following:

- o accessible via automated processes, such as electronic databases
- o edited by human experts
- o edited explicitly and/or implicitly by user communities (implicit editing would be those new associations inferred by automated processes that are able to accompany users while they access the services)
- o edited by automatic discovery systems

Further, the system requires a *Registry Editor* that has the ability to create, read, update, and delete listings in a registry (either the Mind-set Registry or the Services Registry). Note that a Registry Editor may be either a person or an automated tool, or a combination.

Finally, the system needs a *Match Maker*, which is responsible for matching user mind sets (goals) with a collection of services and service providers. In order to do this, it communicates with users, a Services Registry, and a Mind-set Registry. Note also that the Match Maker is intended to take the form of automated software, though it might also take other forms such as one or more people, or a combination of people and automated technology tools. It is also intended to have, but need not have, the following capabilities:

- Rank services and service providers according to their priorities and/or appropriateness to that user at that time
- Apply rules to the context of that user, his or her mind set, and the collection of services and service providers. These rules include, but are not limited to, identifying cross-selling opportunities and up-selling opportunities.

In a given contextual domain there will be a collection of users, a collection of known services and service providers, and a single Mind-set Registry, Services Registry, and Match Maker.

The process of constructing a Contextual Value Chain (“CVC”) requires interaction between a single user and the Match Maker, between the Match Maker and the two Registries, and also private work done by the Match Maker itself as illustrated in **Figure 3**. The process begins when the User 10 announces his mind set to the Match Maker 30 and completes when the Match Maker delivers the CVC back to the user. In particular, the process is as follows:

1. The User 10 announces his or her current mind set to the Match Maker 30. This “announcement” can be either explicitly made by the user or implicitly made on behalf of the user via a surrogate, like an automated inference tool that accompanies the user while navigating. This “mind-set” is intended to take the form of a goal, but is not limited to that form (for example, the mind-set of looking to buy a computer, or the mind set of looking to plan a party). An explicit mind set may be in the form of a URL, a stated goal, or Search term entered into the User’s web browser, e.g., Compaq.com or “computer.” It may also be implicit, e.g., an Amazon.com URL implies the user is interested in, i.e., has a mind set directed to, the purchase of books. Also, the Compaq.com URL may be interpreted not as an explicit mind-set to purchase a Compaq computer, but an implicit

mind-set to purchase a computer in general. Furthermore, by examining the content delivered to users (e.g. via web pages) and by extracting relevant keywords and structured objects composed of these keywords, the Match Maker 30 can that much more accurately infer likely mind sets and goals with specificity and via a scalable means.

2. The Match Maker 30 cross-references the user's mind set with the Mind-set Registry 34 to determine the set of known services that are appropriate to include in the CVC. The Match Maker 30 may also apply a set of rules to re-order and/or filter the set of services.

3. The Match Maker cross-references the set of services with the Services Registry 38 to determine the known service providers of each of those services. The Match Maker may also apply a set of rules to re-order and/or filter the set of service providers associated with each service.

4. The Match Maker may apply a set of rules to add special enhancements to the CVC, such as cross-selling promotions, and then the Match Maker completes the construction of the CVC (the list of services and the list of service providers for each service, including additional custom services or promotions).

5. The Match Maker 30 provides the CVC to the User 10. This "providing" is intended to be implemented by sending the CVC encoded to a tool, such as, but not limited to, a software tool that decodes the CVC and displays it to the user via a graphical user-interface (GUI) or other user interface. For example, if the user's mind set is to buy a computer, the CVC contents might look like this:

5

SP2. DealTime

10

15

SP2. Deja

S3. Find an ISP

SP2. Earthlink

SP3. MSN

SP4. ...

S4. ...

20

maintained at the system manager web site and the browser is directed to it for access to the latest data whenever the browser is used.

In order to create CVC's that are accurate and take maximal advantage of the services and providers that exist, there must be processes to keep the Registries current and also to grow their size to accommodate new services and providers over time. The maintenance is accomplished by a collection of independent processes involving the Mind-set Registry, the Services Registry, one or more Registry Editors, and the community of users and service providers. The following is a description of these processes as illustrated in **Figure 4**:

Mind-set Registry maintenance is managed by one or more Mind set Registry Editors 40 (either person(s) 42 or automated tools 43 or a combination). These mind set editors 40 interact with the user community to discover new mind sets (goals) that should be added to the Mind set Registry 34, and also which services should be associated with that mind-set. An example of an automated tool 43 acting as a Mind set Registry Editor is one that collects recommended new goals offered by users, applies some rules (filtering or otherwise), and then adds them into the Registry. Mind set Registry Editors may also be people 42 who read, update, and delete listings in the Mind-set Registry on their own without interaction with users or other entities.

Services Registry maintenance is also managed by Service Registry Editors 44 (either person(s) 45 or automated tools 46 or a combination). Each service provider has the ability to communicate with a Service Registry Editor 46 in order to suggest that:

- a. it is a provider of a registered service; and

b. a new service, which is not yet listed in the Services Registry, should be added (possibly also suggesting that it is a provider of that service).

Each such Services Registry Editor 44 then may apply some rules (filtering or otherwise) and then interact with the Services Registry 38 to make changes in the listings and associations.

5 Service Registry Editors 45 may also read, update, and delete listings in the Services Registry on their own without interaction with service providers or other entities. These editors are typically persons hired by the system manager to perform this function. However, these independent editors 45, as well as Mind set Registry Editors 42, may be wholly or partially automated through the use of web spider technology.

10 In carrying out this update function with independent editors, some inputs may be the result of independent searches of the Internet by the editors. However, some input may be by way of contractual relationships between the system's administrator and service providers. Such relationships may be based on an agreement by which the service provider pays to be listed in value chains of various sorts. This may be an up front payment or a payment for each user
15 directed to the provider's web site by the present invention.

The process of ongoing registry maintenance as illustrated in Figure 4 is typically performed by or under the control of the system's administrator, and the results are made available at the system administrator's web site for downloading to the web browsers of the users.

20 In use, the software defining the present invention is installed as a plug-in to the user's web browser. Then, as an example, if the user has the goal of purchasing a computer, the user may insert the URL "Sony.com" into his or her browser in order to look for computers. (Figure 5). When the user arrives at the *computing* area of the Sony site, the Context Bar 50 (at

the bottom) infers or guesses that the user might be trying to buy a computer, or learn about computers, or research a computer. These goals are suggested to the user as tabs 51-53 in the Context Bar 50. A drop down pick list 56 is also provided in the Context Bar 50 so that the user can select a particular computer (filtered for Sony). This is a form of context inference.

5 If the user selects the "Buy a computer" tab 51 and also selects a particular computer in the pick list as the computer to focus on, e.g., the "Sony VAIO J100," a Contextual Value Chain 60 is shown to the user in the Context Bar 50 as illustrated in **Figure 6**. If the other tabs 52 or 53 are selected, other value chains are presented (not shown). Any of the services shown in that bar may be linked to by clicking on the name of the service, e.g. "purchases," "warranty," "Internet Service," "Review," "Software," etc. Each service is tied to a default provider, though there are also various alternate providers that the user might choose to associate with that service instead). If for example the user clicks on the "Review" service, the browser is caused to deep navigate directly to the page at CNET containing the review of the Sony VAIO PCV-J100. See **Figure 7**. Also the navigation event is added to the activity history 72 on the
10
15 right side on the Context Bar 50, indicating that the user is working toward buying a computer, and has now taken one step, which is to review that model VAIO.

Further, a promotion 74 appears from Compaq in the space at the left side of the Context Bar 50. In Figure 7 this advertisement is indicated only as the word "Compaq"; however, it may be an actual advertisement. Further, the name or advertisement will typically be a
20 hyperlink to the service provider's web site, e.g. to Compaq's site. The appearance of the Compaq promotion 74 assumes that Compaq has bought the right from the system administrator to offer promotions in the context of users working toward buying computers. The alternate

provider, i.e., Compaq, may purchase the right to advertise whenever a user demonstrates a “computer” mind set, or it may purchase a more limited right. For example, it is possible that Compaq has bought only the right to advertise to those users in the “Review” stage of the value chain set up for the process of purchasing a computer. This is a form of context marketing. If the user clicks on the Compaq advertisement, the browser takes them to the Compaq web site. Thus, Compaq can pay the system administrator a flat fee or a fee based on the number of users that click on to the Compaq link.

Next the user may click on the “Search Auction” service which looks for computers with similar specifications at an auction site. The browser page for this is shown in **Figure 8**. In this case the user is brought to BidCrawler and is shown a list of 600 MHZ computers (as is the VAIO PCV-J100) currently up for sale by auction. Note also that this second step in the activity is added to this history on the right of the Context Bar.

Finally, the user may consider another similar computer, e.g., the user may select the VAIO PCV-R532DS from the pick list in the Context Bar. Then he clicks the “Reviews” service to see reviews of this model. This causes the browser to jump back to CNET, again deep navigating to the appropriate page containing a review for that computer (**Figure 9**). Also the activity history on the right reflects that the user has now reviewed two computers. If the user wants to jump back to the review for the other computer, he can click on the PCV-J100 in that activity history tree.

Anyone who uses electronic media, such as the Internet through desktop or personal computers, web-enabled phones, personal digital assistants (“PDAs”) or other wireless or voice-based digital platforms, and pagers are in a position to benefit from the present

invention. Moreover, a provider of such media and services is able to leverage the infrastructure to bring targeted users to them at just the right place in the value chain, opening new capacities for traditional up-sales and cross-sales.

The revenue streams that the system can generate include:

1. *Affiliate traffic revenues.* Users, in their attempt to find information, generate traffic to a system partner and affiliate sites, generating revenue for the system operator for each such click-through.
2. *Affiliate sales revenue.* Users participating in electronic commerce through purchase or sale can generate a transaction-based commission for the system operator. The system's client-side software is closer to the users than web-based hub sites, making it easier for the system operator to realize a large portion of the commissions on this revenue.
3. *Technology licensing.* Other service providers who wish to provide tools such as the present invention, either on their web sites or tied to their corporate intranets, can generate licensing revenues.
4. *Server-side software sales for businesses to plug into the framework.* Businesses that wish to use this framework to push cross values and up values to a user's current activity may plug into the framework by purchasing server side space from the system operator. This is an excellent opportunity for using context marketing to cross-sell products and services.

As noted previously, there is value in the system of the present invention to both users and service provider. In particular, users get the benefits of targeted services anywhere on the web by means of a single mouse click. This relieves the user of having to remember

particular URLs. The system also provides the user with easy access to relevant information and services at a given site through one mouse click, instead of having to surf through a site to find the relevant information. Thus, there is reduced repetition as users move from site to site, since they do not need to restate again and again what they are seeking (for example, entering a stock symbol at E*Trade, then entering it again at Edgar, and so on).

Similarly, service providers receive significant benefits from the system. They can target users anywhere on the web by a single mouse click. This provides powerful new opportunities for cross-sales and other cross-functional services, even to users who are not visiting the service-provider's site (for example, allowing Amazon.com to sell overstocked computer books to someone shopping for a computer at Dell or Gateway). In addition, the service providers get expanded reach to current customers, affording a new dimension of customer retention for that service provider. For example, Epinions.com might become the default or exclusive opinion provider for all users to whom it distributes the system software, e.g., the browser plug-in. The provider also gets relief from spending huge sums to aggregate services so that users are more likely to complete transactions at that site. As an example, CNET by adding product reviews from customerreviews.com or epinions.com may cause more users to make purchasing decisions at CNET.

As noted in Figure 7, while navigating the Internet, the user is presented with advertisements 74 which match the context suggested by that navigation. These advertisements may also provide links to affiliates. This is accomplished by a contextual advertisement and contextual affiliate designation system which forms part of the present invention. This system is a design to enable companies using the present invention to improve the performance of their

online advertisements and affiliate marketing by presenting users with advertisements and affiliate links that are in context with the mind sets of the users. The contextual advertisements and affiliate links may be constructed in real time or they may be carried out prior to use.

The contextual advertisement and contextual affiliate designation system of the present invention is illustrated in **Figure 10**. It includes an Ad Server or the Affiliate Site 122 which implements the contextual advertisement or contextual affiliate links, respectively, to improve the performance of the advertisements or affiliate links it serves for other service providers. The Service Provider 16 as illustrated in Figure 10 is the company that uses the system to deliver advertisements which promote it's services or to provide links to its services. It may do this directly or through an advertisement server or affiliate site 122.

The system also requires a Rules Registry 100, which is a data store that identifies a set of unique rules for when an advertisement or an affiliate link should be shown to a particular user. These rules are defined by the Service Provider 16 to indicate when a particular advertisement or affiliate link would be most relevant to a user. In the example of a Service Provider that sells computer memory, it will define a particular rule (such as "object = computer & memory <= 32MB") and map that to a particular advertisement (such as "Upgrade your computer to 64 MB). Note that an advertisement or affiliate link can be mapped to more than one rule.

Below is a simplified illustration of the concept of a Rules Registry:

RULE	AD or AFFILIATE LINK
Object = "Computer" and Hard Disk <= "2 GB"	Upgrade to 4 GB Hard Disk Space
Vertical = "Travel" and Destination="San Francisco"	Discounts at Holiday Inn San Francisco
Vertical = "Travel" and Destination Airport="LaGuardia"	Discounts at Avis Rent-a-Car at LaGuardia

Note that the Rules Registry is also intended to be, but does not need to be, the following:

- accessible via automated processes, such as electronic databases
- edited by automated processes
- edited by human experts

Further, as shown in **Figure 11**, the system requires a Registry Editor 110 that has the ability to create, read, update, and delete listings in the Rules Registry. Note that a Registry Editor may be either a person 112 or an automated tool 114, or a combination thereof.

Returning to Figure 10, the final component of the system is the Match Maker 30', which is the company who implements the matching steps of the present invention. The functions of both the Ad Server or Affiliate Site 122 and the Match Maker 30' may be accomplished by the system's administrator. The Match Maker 30' builds the advertisement and the affiliate links on top of the context infrastructure of the rest of the present invention. In particular, the Match Maker 30' parses the content of the customer's current page, groups attributes to form structured objects, communicates with the Rules Registry 100 and produces a set of contextually relevant advertisements or affiliate links in response thereto.

The process of constructing contextual advertisements or affiliate links requires interaction between a single user 10 and the Advertisement Server or Affiliate Site 122, between the Advertisement Server or Affiliate Site and the Match Maker 30', between the Match Maker 30' and the Rules Registry 100, and also private work done by the Match Maker 30' itself. The process begins when the user browses the Internet and completes when the Advertisement Server or Affiliate Site ("A/A Site")122 delivers the contextual advertisement or affiliate link back to the user. In particular, the process is as follows:

1. The user 10 starts browsing the Internet and comes across an A/A Site 122 that has a contextual advertisement or affiliate link embedded in it.
2. As the user browses, the server which hosts the A/A Site 122, which serves the affiliate link. It sends the content of the page the user is viewing to the CSP 120.
3. The CSP parses the content of the page that the user is viewing and identifies the objects and their attributes which are mentioned on the page. The CSP 120 intelligently groups together the attributes belonging to a particular object. For example, a page may mentions several computers and for each computer, it may mention attributes such as brand, processor type, and processor speed. The CSP will group together the attributes belonging to each computer object and produce a list of computer objects found on the page.
4. The CSP then cross-references the objects that are found with the Rules Registry 100 to determine the set of contextual advertisements or affiliate links

that are relevant to the current content. The CSP returns this set to the Advertisement Server or Affiliate Site 122.

5. The A/A Site 122 may also apply additional rules, such as user demographics, to pick a particular advertisement or affiliate link if more than one is returned by the CSP 120.
7. The A/A Site provides the user with the contextual advertisement or affiliate link.
8. The user 10 views the contextual advertisement or affiliate link and clicks on it if he or she is interested in the information shown. Clicking on the advertisement or affiliate link makes a call to the Service Provider 16 asking for the content of that particular advertisement or affiliate link.
9. The Service Provider 16 serves up the appropriate content to the user.

In order to present the user with the most appropriate advertisement or affiliate link, there must be processes to keep the Rules Registry current and up to date. The maintenance is accomplished by processes involving the Rules Registry 100, the Registry Editors 110 and the Service Provider 16. As noted above, this maintenance process is illustrated in Figure 11. In particular, the Service Provider uses one or more Registry Editors 110 (either person(s) or automated tool(s) or a combination thereof) to input new advertisements, affiliate links or rules, and update existing advertisements, affiliate links or rules.

In use the contextual advertisement and the contextual affiliate link software and hardware provides an infrastructure that provides contextual presentation of the

advertisements and links. As an example, if Hewlett-Packard ("HP") is the Service Provider
16 which is using contextual advertisement, HP will define the rules for when its
advertisement should be shown. If HP defines a rule that targets the selling of HP printers
with Compaq computers, then when a user looks at a page with Compaq computers, the
5 appropriate HP advertisement 128 will be shown as illustrated in **Figure 12**. In another
example, assume that Barnes and Noble is the Service Provider who has an affiliate program
and CNET signs up to be Barnes and Noble's affiliate site. Then Barnes and Noble can
define a rule that an affiliate link for books on "PC Computers" should be shown when a
user is looking at Dell computers. As a result, when a user looks for Dell computers at CNET,
10 the appropriate advertisement and affiliate link 130 for Barnes and Noble is shown as
illustrated in **Figure 13**.

As these examples show, the contextual advertisement and contextual affiliate
link tools are very effective and powerful ways for companies to improve the performance of
their advertising efforts and their affiliate marketing efforts by providing contextual
15 advertisements and affiliate links. There is value in the system of the present invention to
both users and service providers. Users get the benefit of contextual advertisements and links
targeted to their mind set. Service providers who use this technology get the benefit of greatly
increasing their revenue and click-through rates by establishing a high correlation between the
advertisements or affiliate links being served, and the user's current mind set.

20 As a further means for leveraging the contextual technology of the present
invention, a Service Provider using the system can improve customer retention through the
use of a *Contextual Icon*. This icon is provided by the system and designed to enable

companies to improve their customer retention by presenting their customers with contextual services anywhere on the Web. The contextual services may be constructed real time or they may be constructed prior to use. As with the basic contextual functionality, this additional functionality may be implemented via a plug-in for the user's web browser, but it can also be implemented in other ways..

A Context Service Provider is a company that implements the Contextual Icon by providing it to companies, e.g., Service Providers, who are interested in using it to improve their customer retention. The Contextual Icon is customized to feature the services that are offered by the Service Provider using the Contextual Icon. The Service Provider will provide the user with the Contextual Icon so that the Customer has access to the Service Provider's services from anywhere on the Web.

As shown in **Figure 14**, this phase of the system requires an *Object Registry* 140, which is a data store that identifies a set of unique objects that are related to the services provided by the Service Provider. The registry maps each object to the set of services offered by the Service Provider 16. In an example of a Service Provider who provides reviews on computers, the Service Provider will define the identifying attributes of a computer object (such as brand, model, processor, etc) and map the object to the relevant service (e.g., the Compaq Presario 5001R maps to a review for that particular computer) Note that an object can be mapped to more than one service. In addition, note that the representation of these services in a user interface may vary independent of the service descriptions captured in this registry.

Below is a simplified illustration of the concept of an Object Registry:

OBJECT	SERVICE
<computer brand="Compaq" model="Presario 5001R" processor="750 MHZ AMD® Duron™ "></computer>	Review for a Compaq Presario 5001R computer with a 750 MHZ AMD® Duron™ processor
<computer brand="Compaq" model=" Presario 5001SR" processor="800 MHZ AMD® Duron™ "></computer>	Review for a Compaq Presario 5001SR computer with a 800 MHZ AMD® Duron™ processor
<computer brand="Compaq" model=" Presario 5003US" processor=" 933 MHZ Intel® Pentium® III "></computer>	Review for a Compaq Presario 5003US computer with a =" 933 MHZ Intel® Pentium® III processor

Note that the Object Registry is also intended to be, but does not need to be, the following:

- accessible via automated processes, such as electronic databases
- edited by automated processes
- edited by human experts

Further, as with the Mind set Registry 34 (Figure 4) and the Rules Registry 100 (Figure 11), the system requires a **Registry Editor** 150 for the Object Registry 140 that has the ability to create, read, update, and delete listings in the Object Registry (Figure 15). Note that a Registry Editor may be either a person 152 or an automated tool 154, or a combination of them.

Finally, the system of Figure 14 needs a **Match Maker** 30", which may be similar in function to the Match Maker 30 of Figure 4 and Match Maker 30' of Figure 10. The

Match Maker system's administrator is responsible for matching objects identified on a page with a collection of services offered by the Service Provider 16 that are relevant to those objects. In order to do this, it parses the content of the customer's current page, groups attributes to form structured objects and communicates with the Object Registry 140. For example, when the object "Compaq Presario 5001SR" is identified on the user's page, then the service "Review Your Computer" is mapped to the specific review of that object by that service provider. Note also that the Match Maker system's administrator may be implemented in the form of automated software, though it may also take other forms, such as one or more people, or a combination of people and automated technology tools. It is also intended to have, but need not have, the following capabilities:

- Rank services according to their priorities and/or appropriateness to that customer at that time
- Apply rules to the context of that customer, the customer's mind set, and the collection of services. These rules include, but are not limited to, identifying cross-selling opportunities and up-selling opportunities.

The process of constructing contextual services requires interaction between a single customer or user 10 and the Internet, between the Internet and the Match Maker system's administrator, between the Match Maker system's administrator and the Object Registry 140, and also private work done by the Match Maker itself as illustrated in Figure 14.

The process begins when the customer browses the Internet and completes when the Match Maker system's administrator delivers the contextual services back to the customer. In particular, the process is as follows:

1. The Customer 10, who has downloaded and installed the Contextual Icon on their web browser, starts browsing on the Internet. As the Customer browses, the Contextual Icon sends the content of the page the Customer is viewing to the Match Maker system's administrator.
2. The Match Maker system's administrator parses the content of the page that the Customer is viewing and identifies the objects and their attributes which are mentioned on the page. The Match Maker intelligently groups together the attributes belonging to a particular object. For example, assume that a page mentions several computers and mentions attributes for each computer, such as brand, processor type, and processor speed. The Match Maker will group together the attributes belonging to each computer object and produce a list of computer objects found on the page.
3. The Match Maker system's administrator next cross-references the objects that are found with the Object Registry 140 to determine the set of known services that are contextual, i.e., related, to the current page content.
4. The Match Maker may also apply a set of its own rules to add special enhancements to the set of contextual services, such as cross-selling and up-selling promotions.
5. The Match Maker system's administrator then provides the customer 10 with a set of contextual services. This provision of services may be implemented by sending the set of contextual services encoded to the Contextual Icon or software, which decodes the services and displays them to the customer via a

graphical user-interface (GUI) or other user interface.

6. The Customer 10 may then review the set of contextual services presented by the Contextual Icon and click on a desired service. By clicking on the service, a call is made to the Service Provider, i.e., a link is established to the Service Provider, requesting the content of that particular service.

7. The Service Provider then serves up the appropriate content to the Customer for the service requested.

In order to create a set of contextual services that are accurate and take maximum advantage of the services provided by the Service Provider, processes are necessary to keep the Object Registry current and up to date. This maintenance is accomplished by processes involving the Object Registry 140, the Registry Editors 150 and the Service Provider 16. This maintenance process is illustrated in **Figure 15**. In particular, the Service Provider uses one or more Registry Editors 150 (either person(s) or automated tool(s) or a combination) to input new services, update existing services, input new object definitions, and update existing object definitions in the Object Registry 140.

As an example of use of the Contextual Icon, if the Service Provider 16 using the Contextual Icon is a coupon provider called E-centives, the Contextual Icon 160 will appear on the customer's browser as shown in **Figure 16**. In this example the Contextual Icon 160 has E-centives's logo displayed in it. E-centives has to ask its customers to download and install the Contextual Icon before it appears on the customer's web browser.

If the Customer with the Contextual Icon downloaded to his browser starts browsing the Internet, goes to Amazon.com and looks at the "Black and Blue" album by the

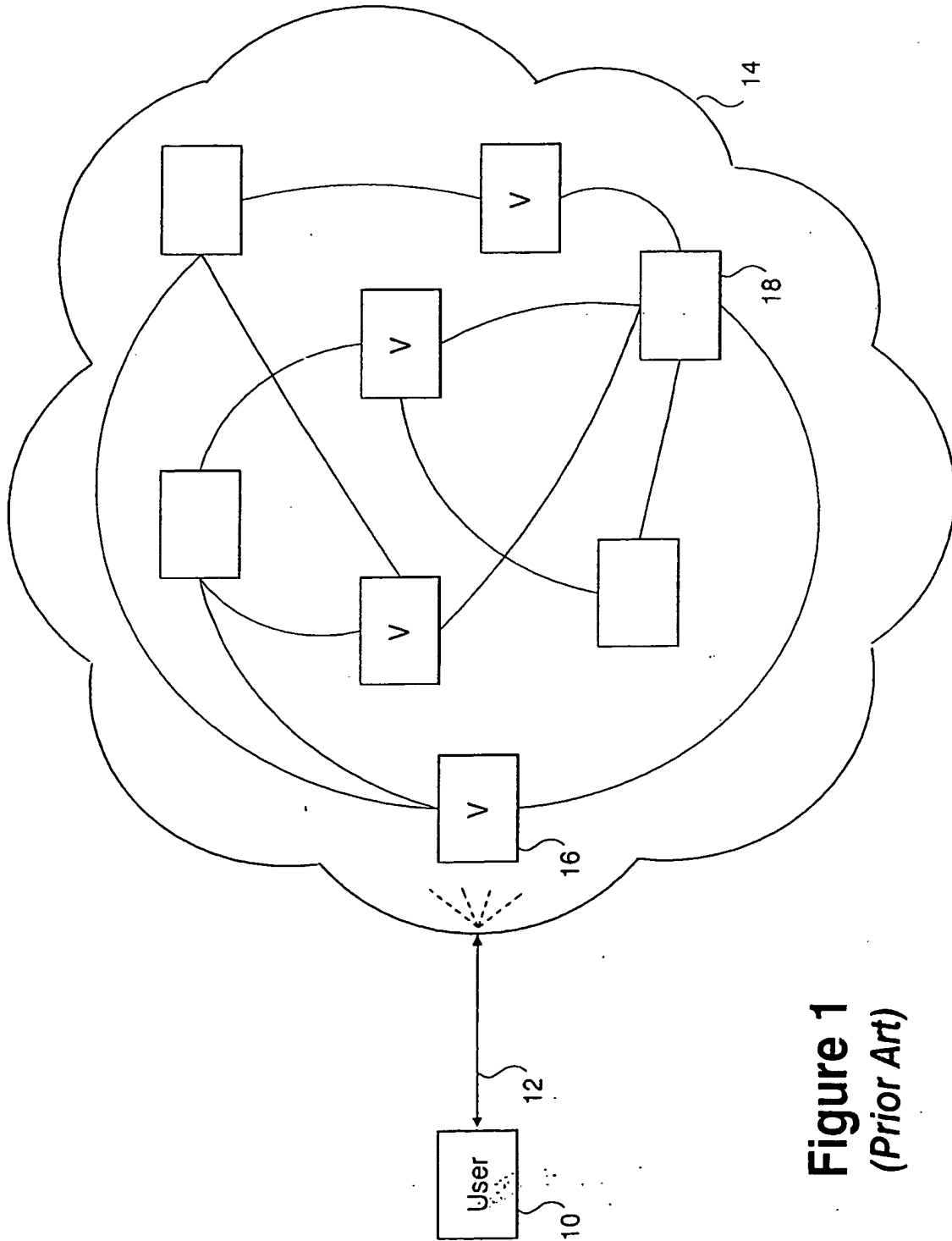
“Back Street Boys” as shown in Figure 16, the Match Maker system’s administrator parses the content of this page and identifies the object “album” with attributes “title” equal to “Black and Blue” and “artists” equal to “Back Street Boys”. Then the Match Maker talks to the Object Registry 140 and identifies all the services that are relevant. From contacting the Object Registry, the Match Maker finds that there is a service for “Back Street Boys” and presents the customer with a service 170 called “Deals for Back Street Boys” as shown in **Figure 17**. If this interests the Customer 10, the Customer can click on the coupon service to see the details as shown in **Figure 18**. The details 180 in Figure 18 show that there is a coupon available for “30% off on Black & Blue Album.” The Customer can then click on the coupon and it will take them directly to E-centives coupon page 190 for the Black and Blue album by the Back Street Boys as shown in **Figure 19**.

As the example shows, the Contextual Icon tool is a very effective and powerful way for companies to provide their services to their customers when and where it makes sense. There is value in the system of the present invention to both customers and service providers. Customers get the benefit of targeted services anywhere on the web by means of a single mouse click. This relieves the user or customer from having to remember particular URLs and names of services that they liked in the past. Service providers who use this technology get the benefit of greatly increasing their customer retention by strengthening their ties with their customers.

While a preferred embodiment of the present invention is described herein, it is to be understood, of course, that changes and modifications may be made in the embodiment without departing from the true scope and spirit of the present invention as defined by the

appended claims.

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FOI b 7 - D



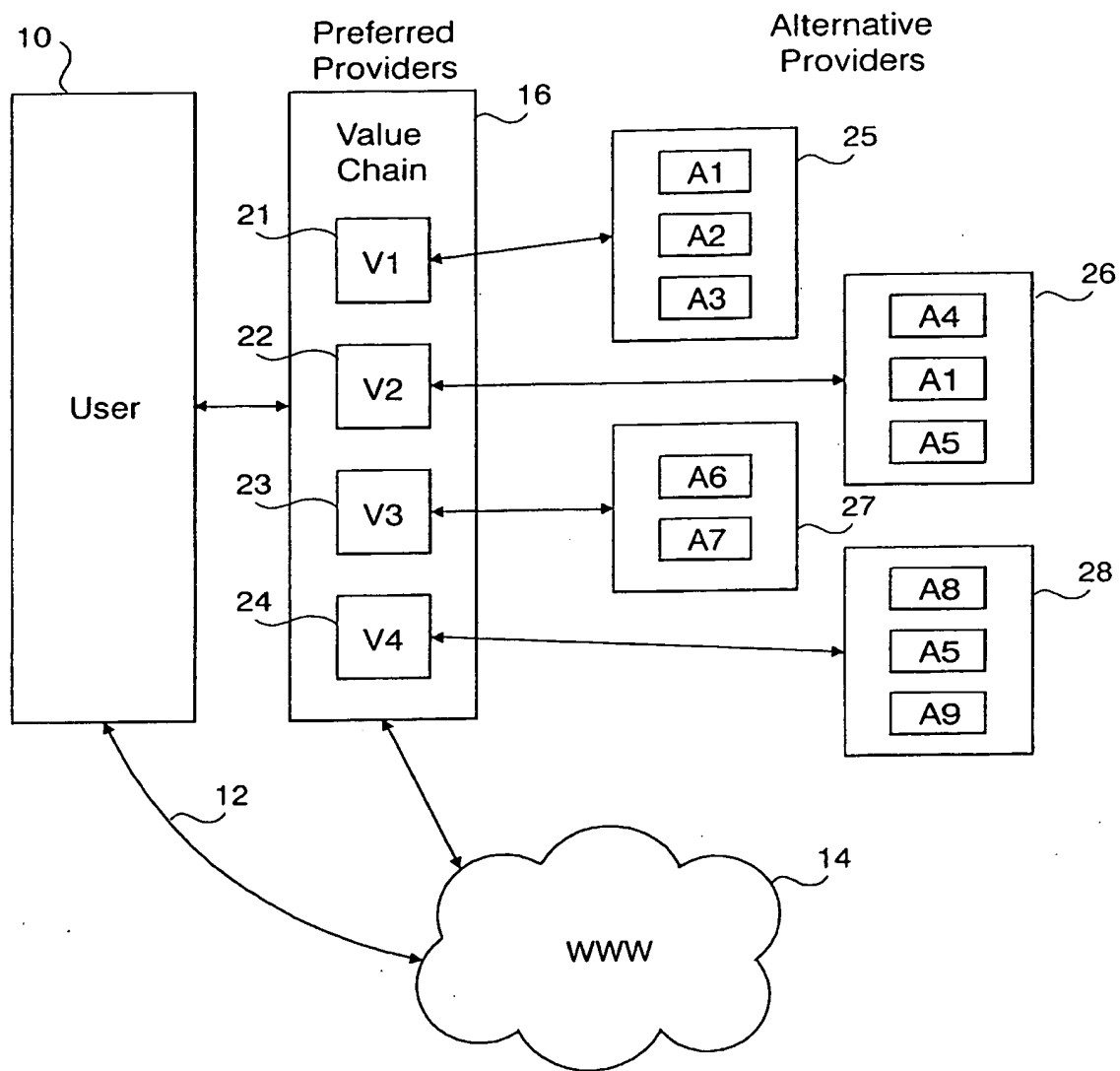
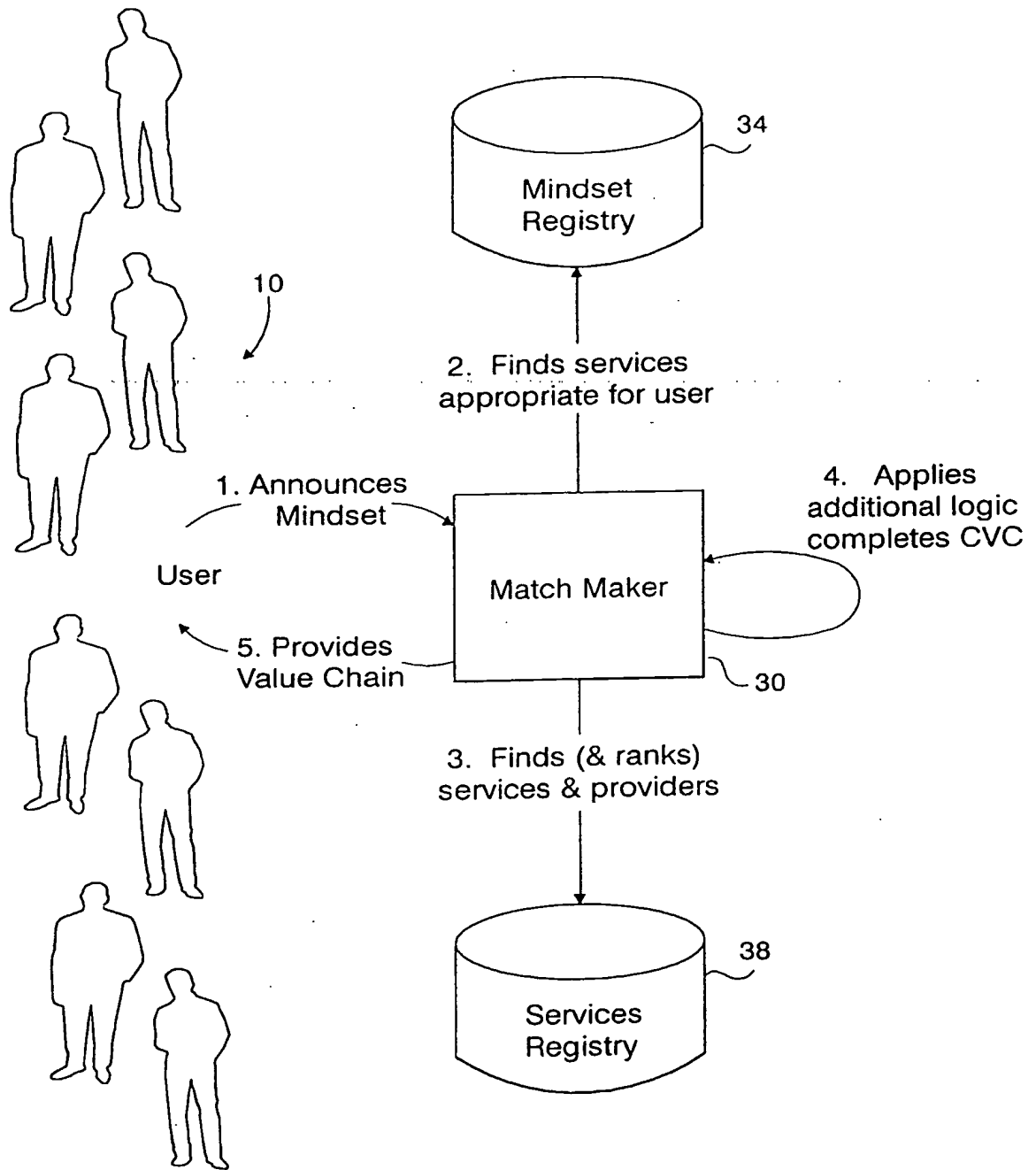


Figure 2
(Prior Art)

**Figure 3**

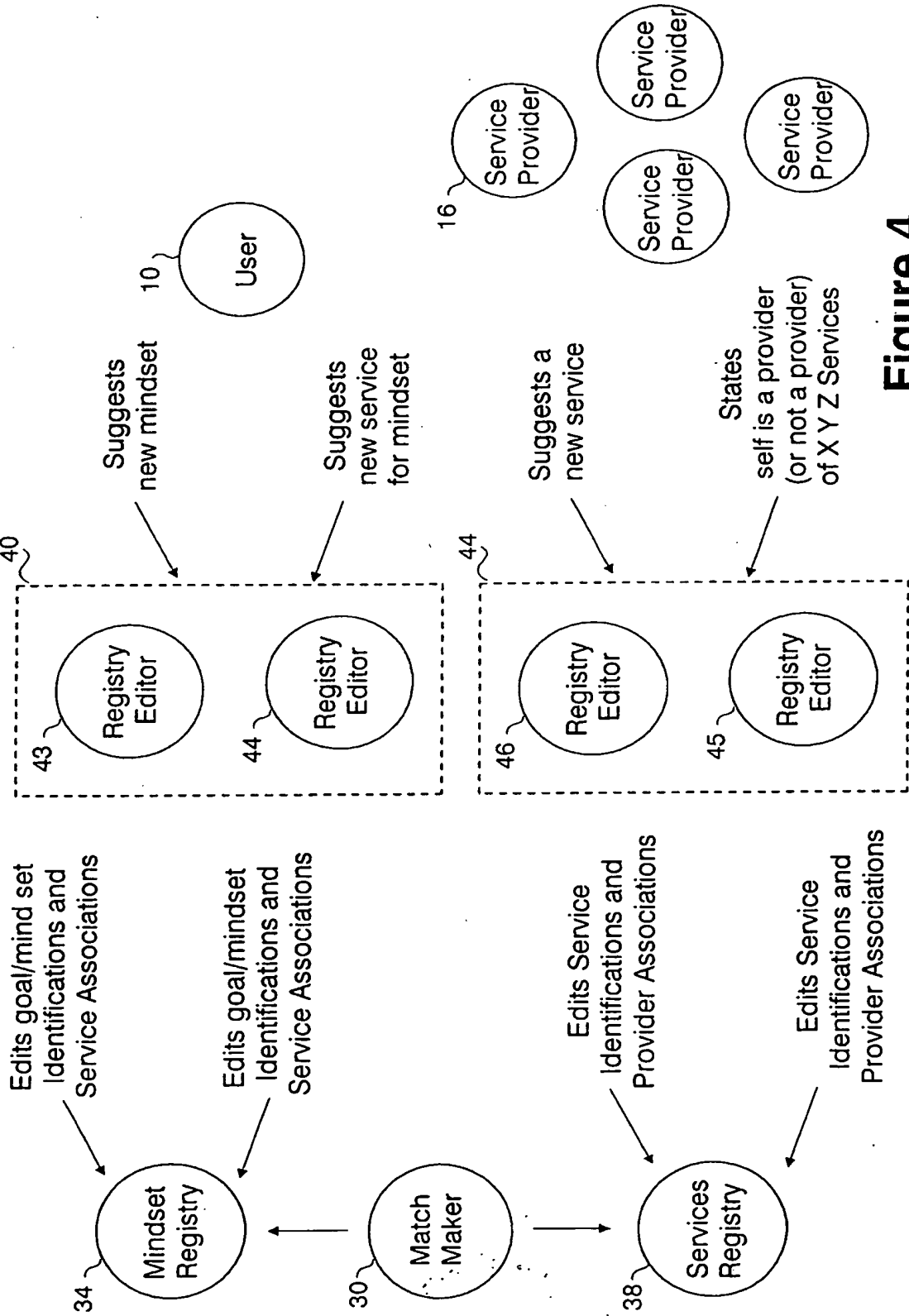


Figure 4

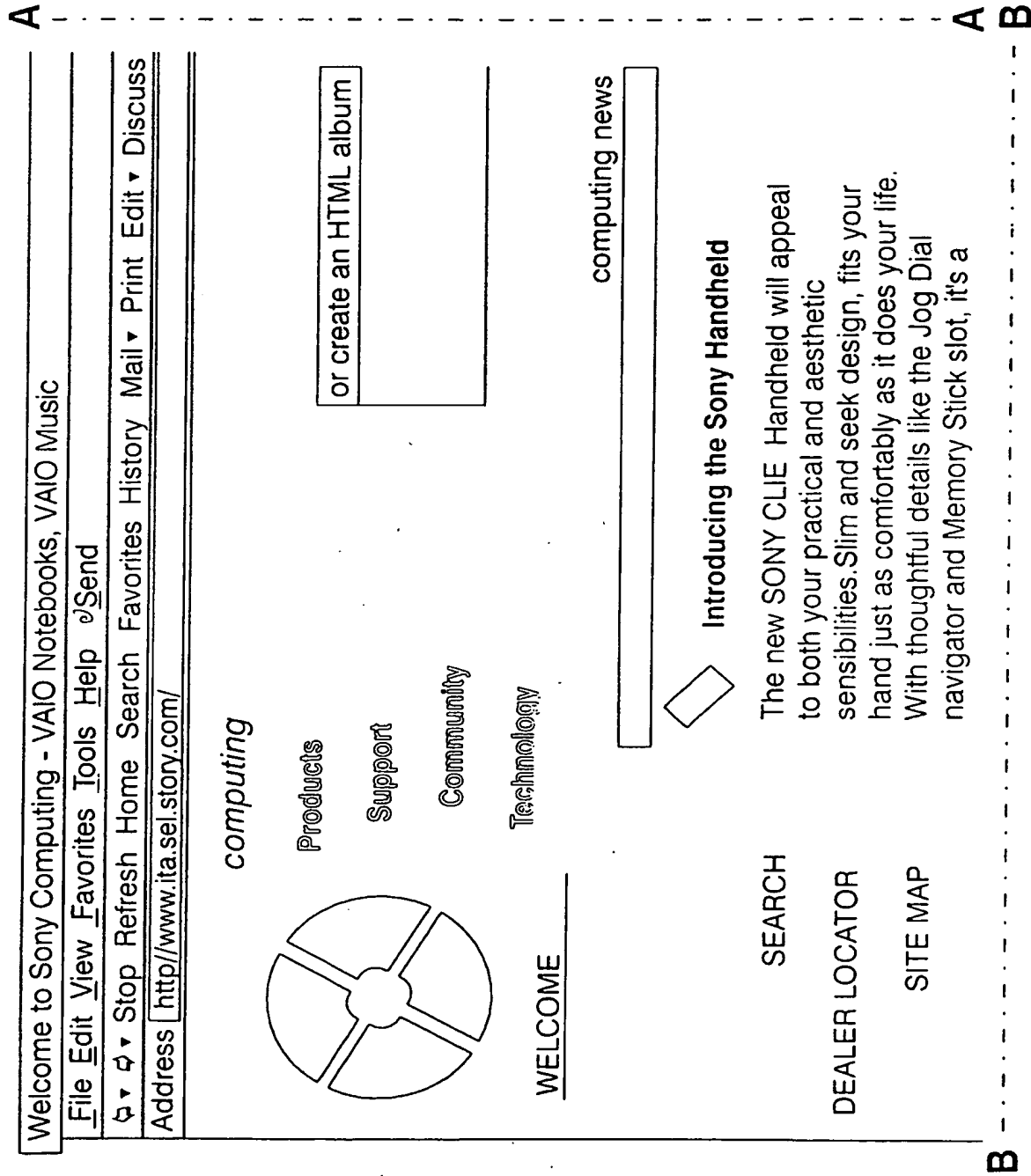


Figure 5A

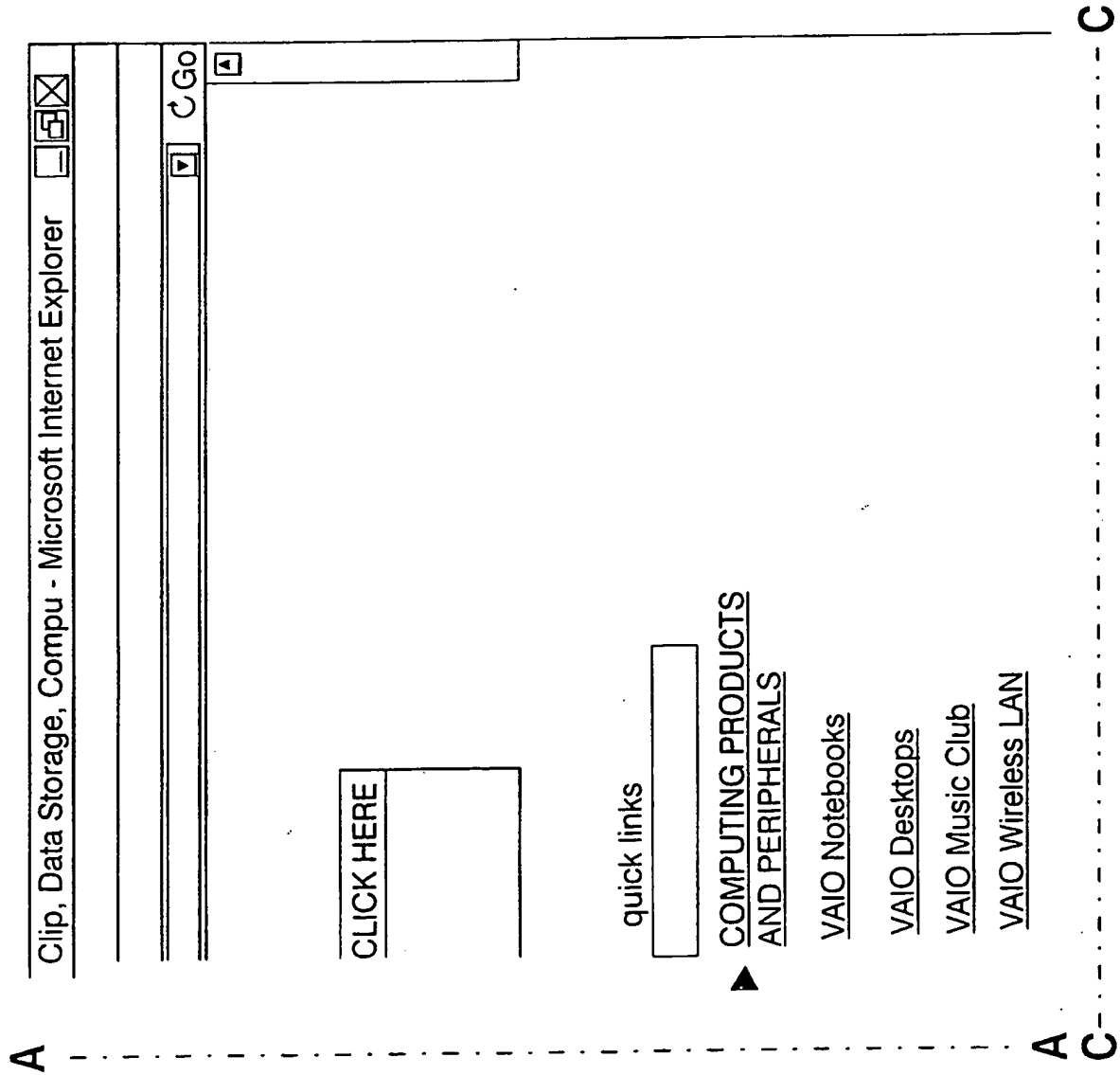


Figure 5B

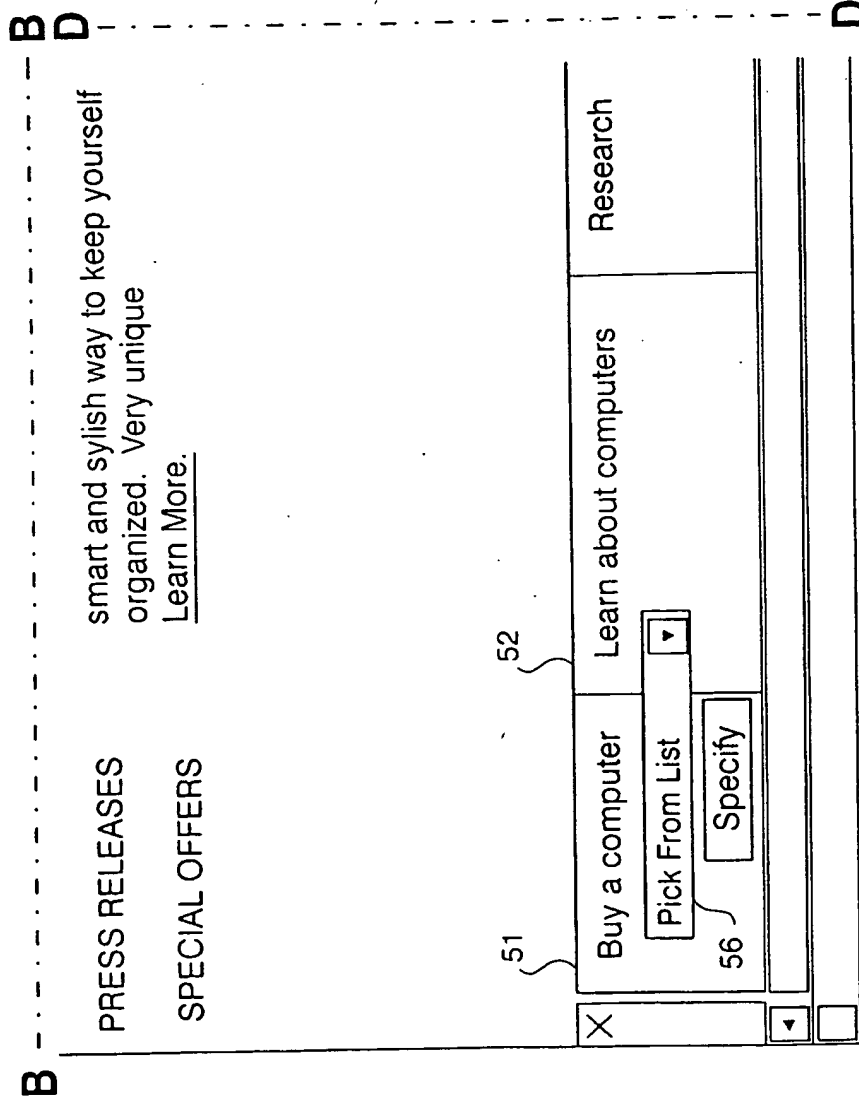


Figure 5C

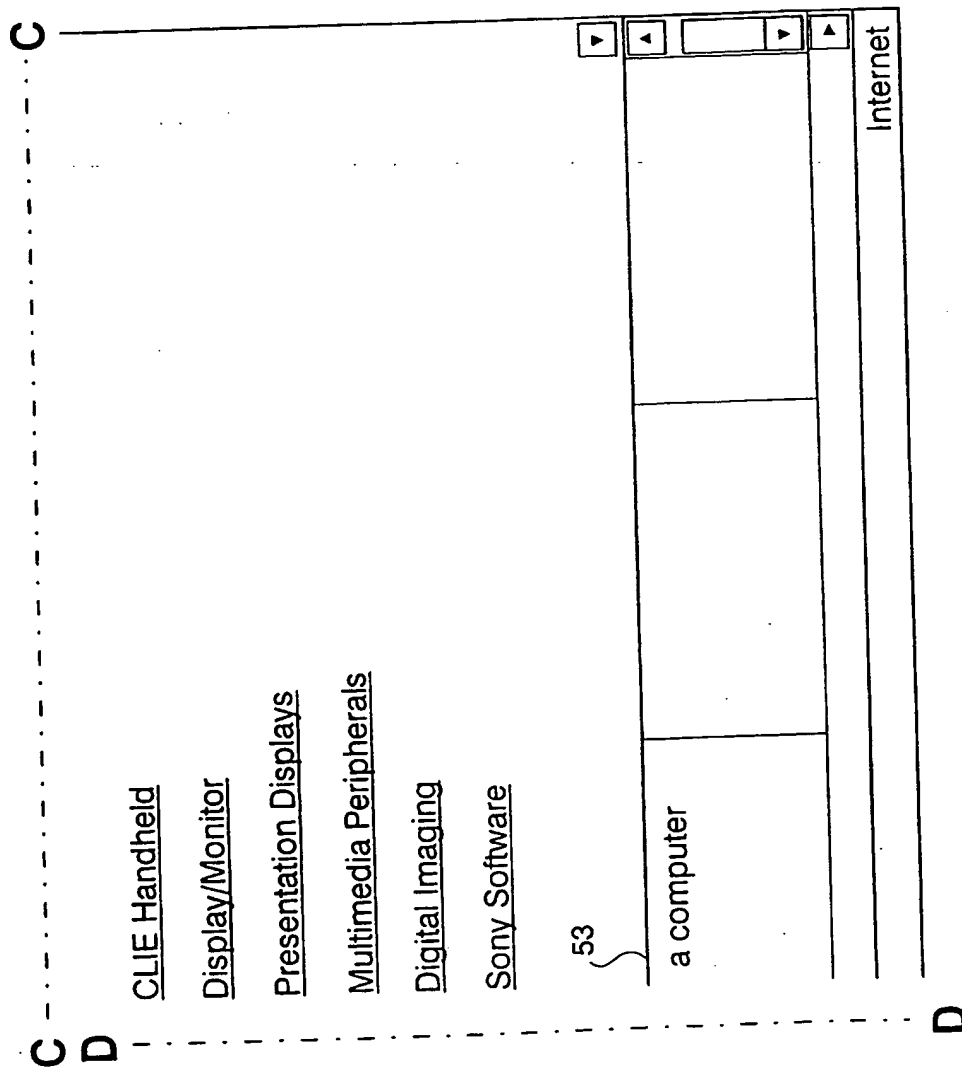


Figure 5D

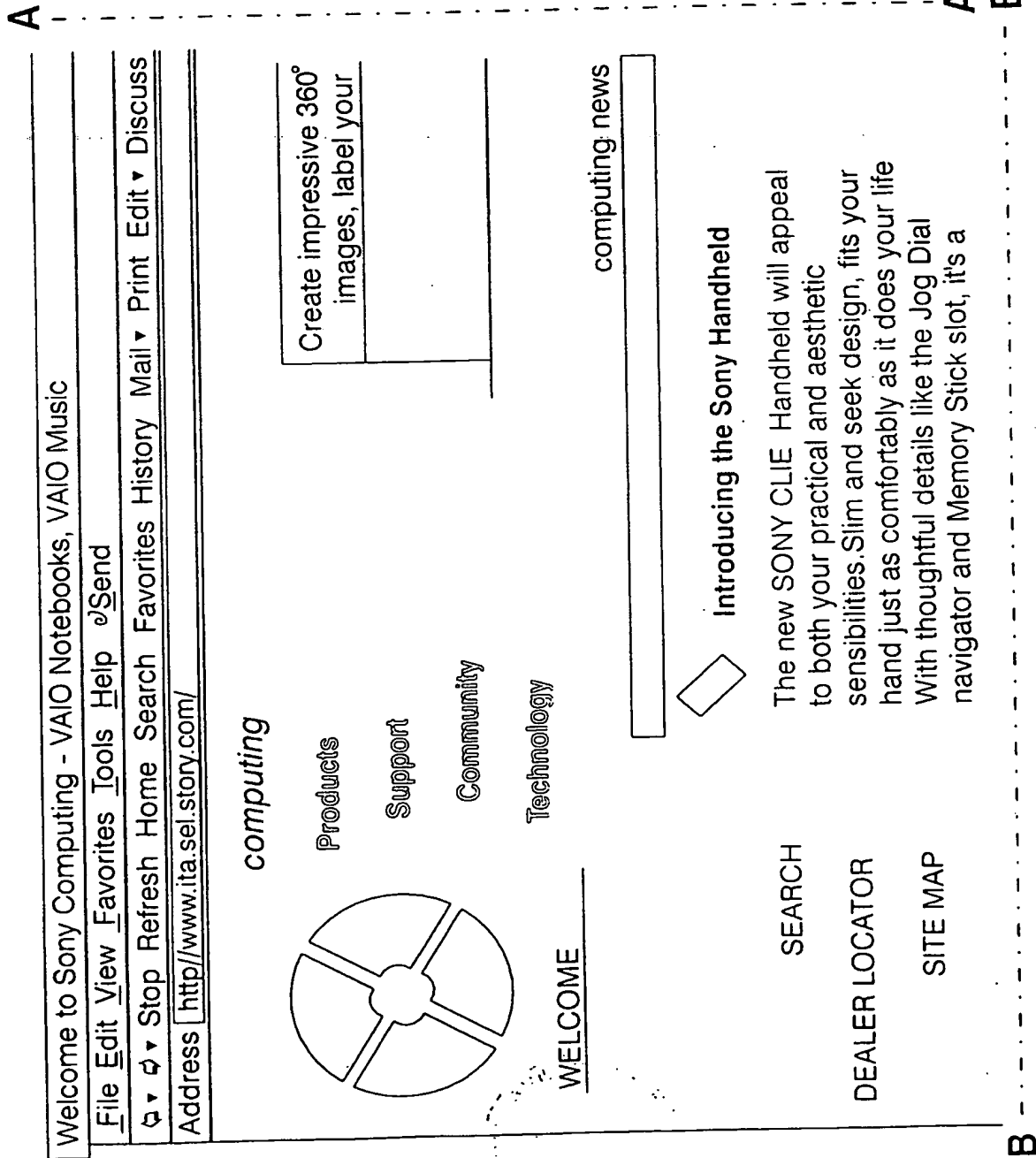


Figure 6A

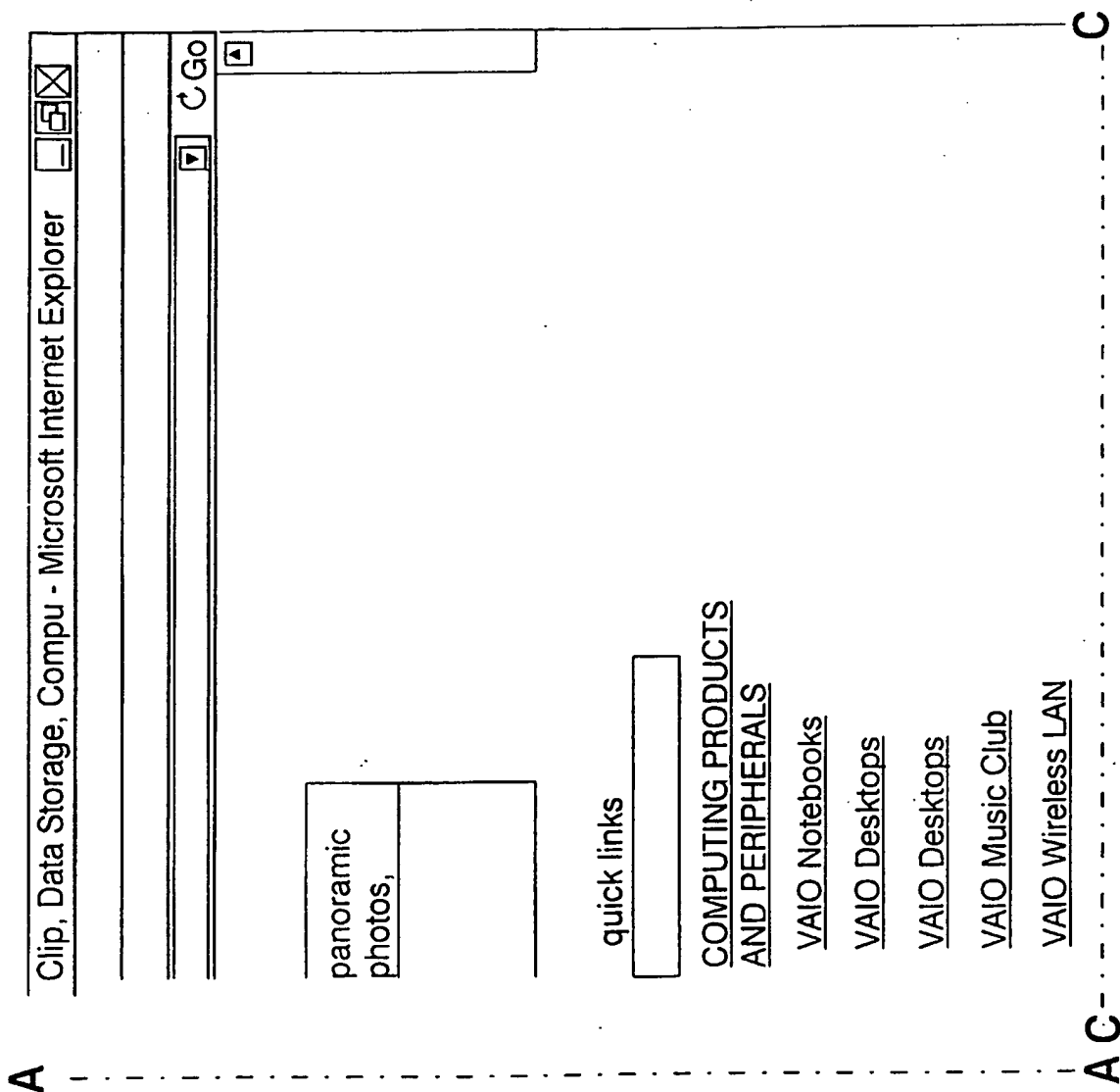


Figure 6B

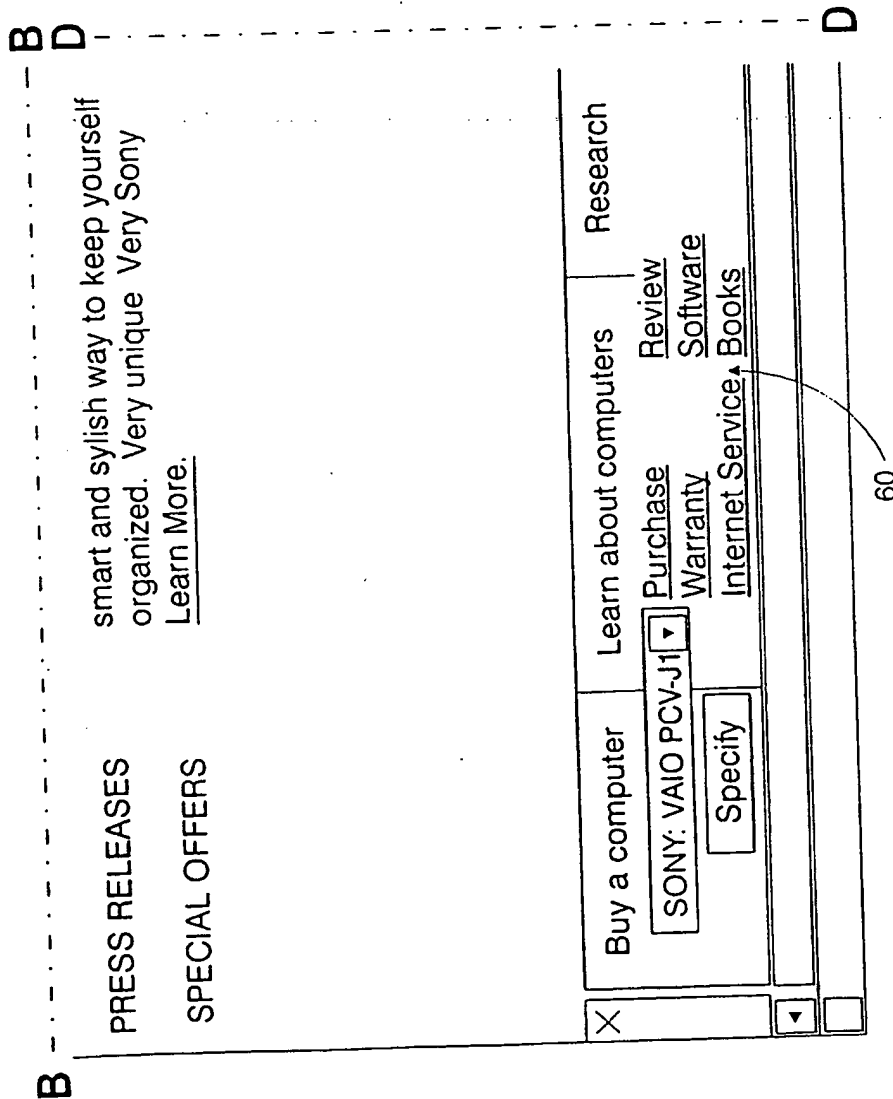


Figure 6C

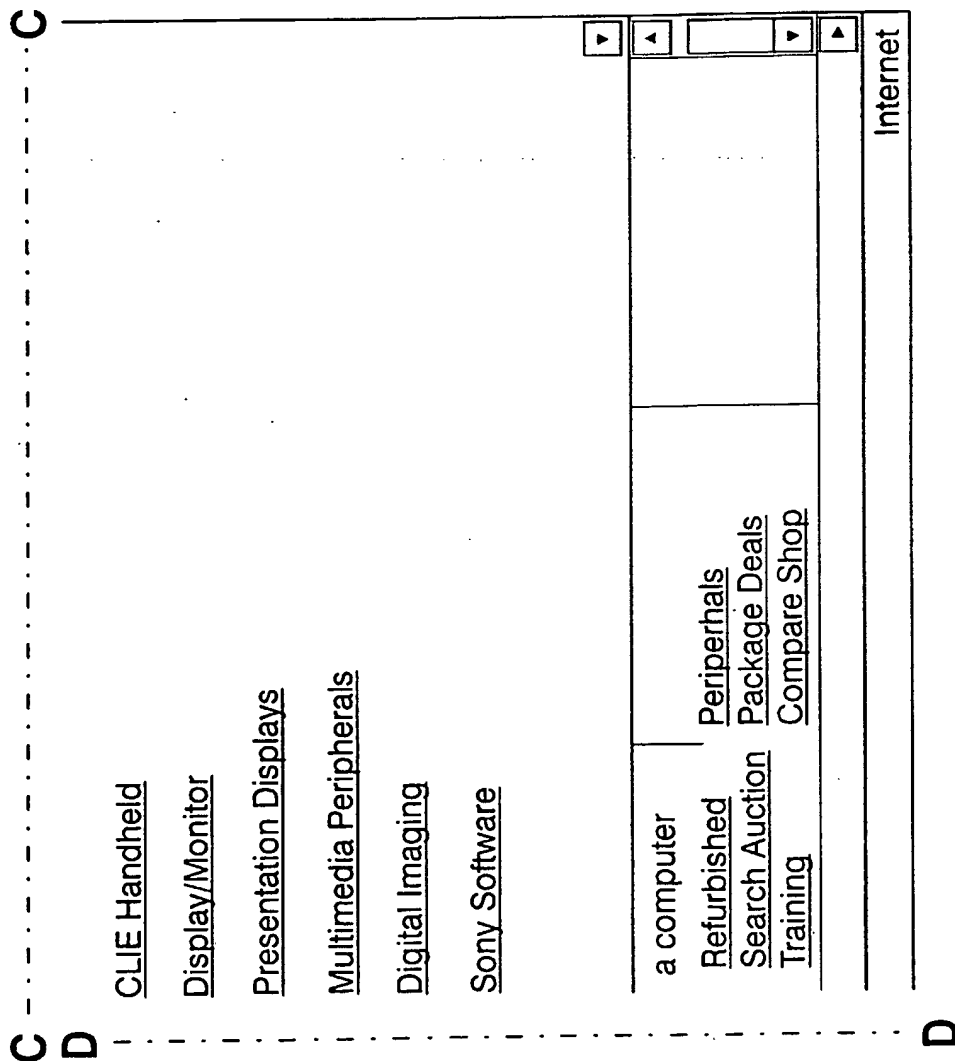


Figure 6D

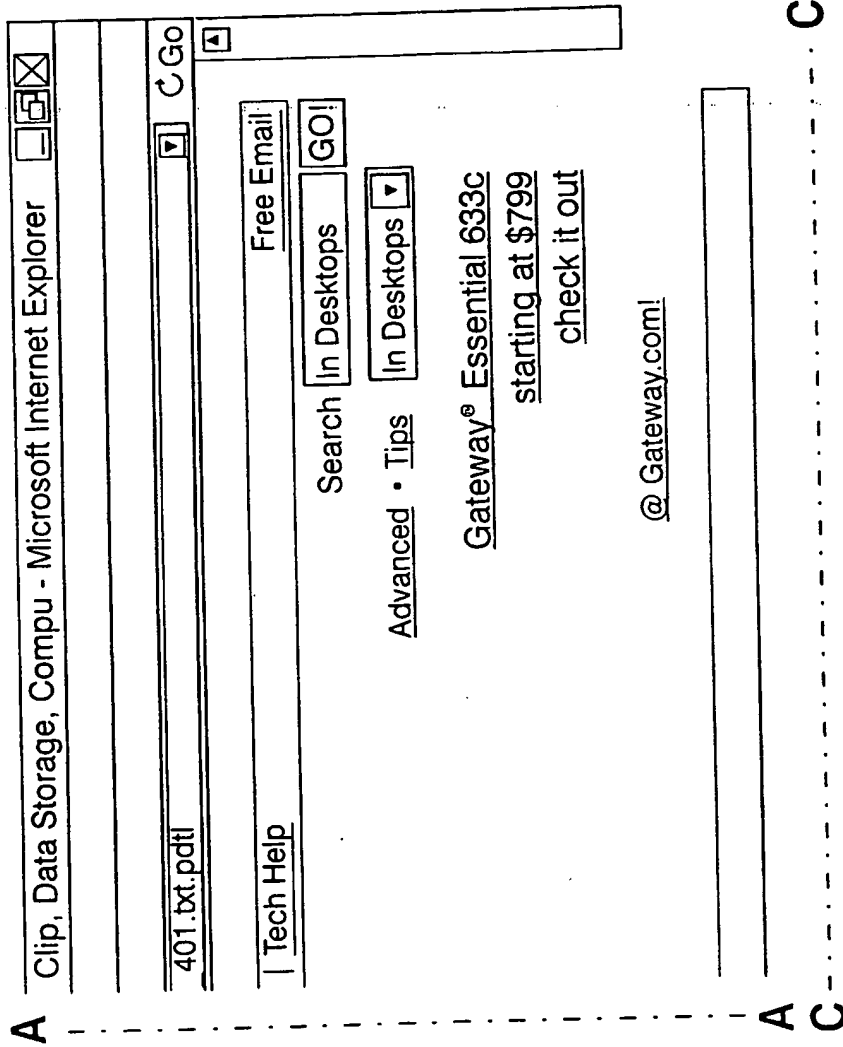
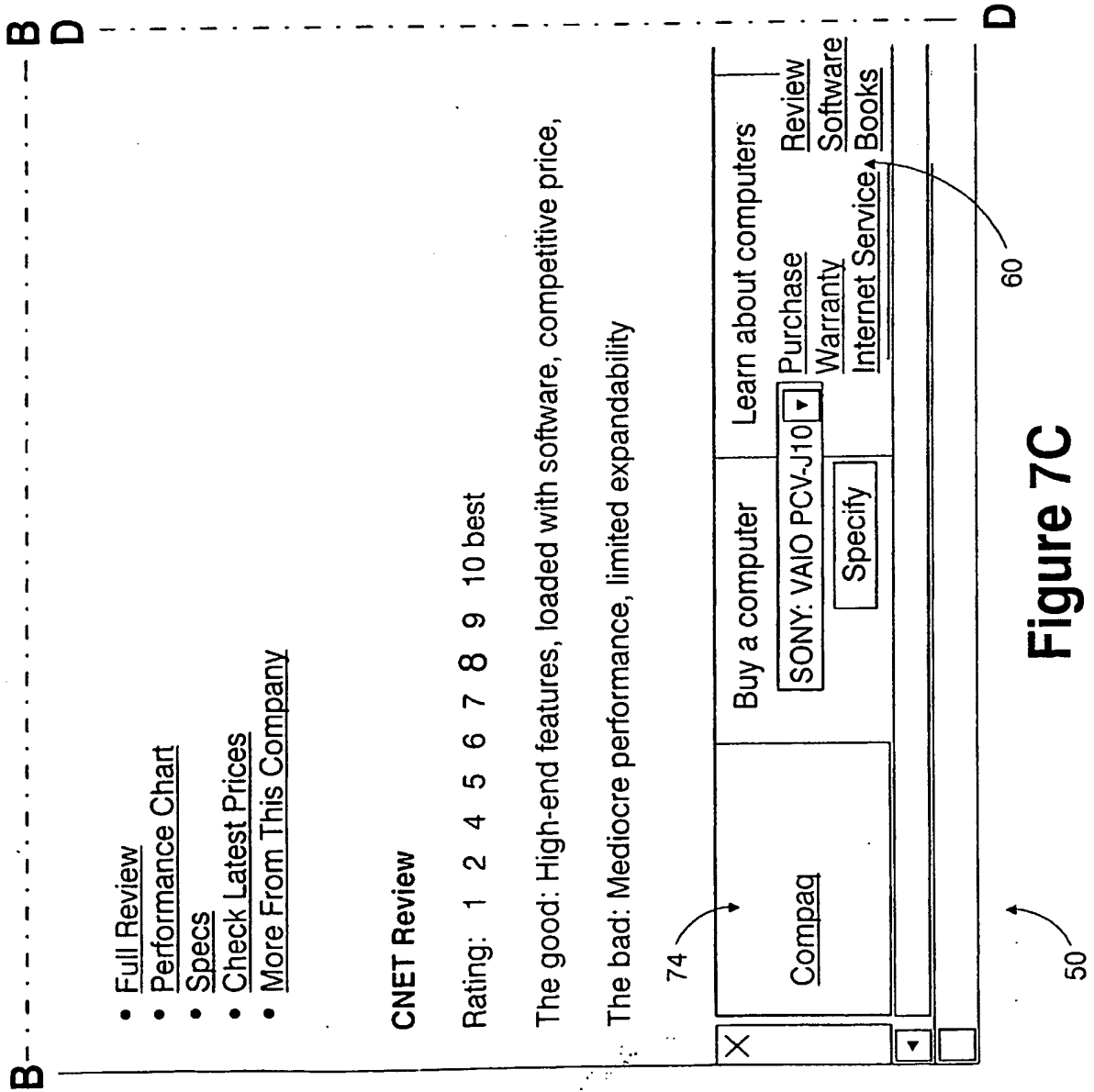


Figure 7B



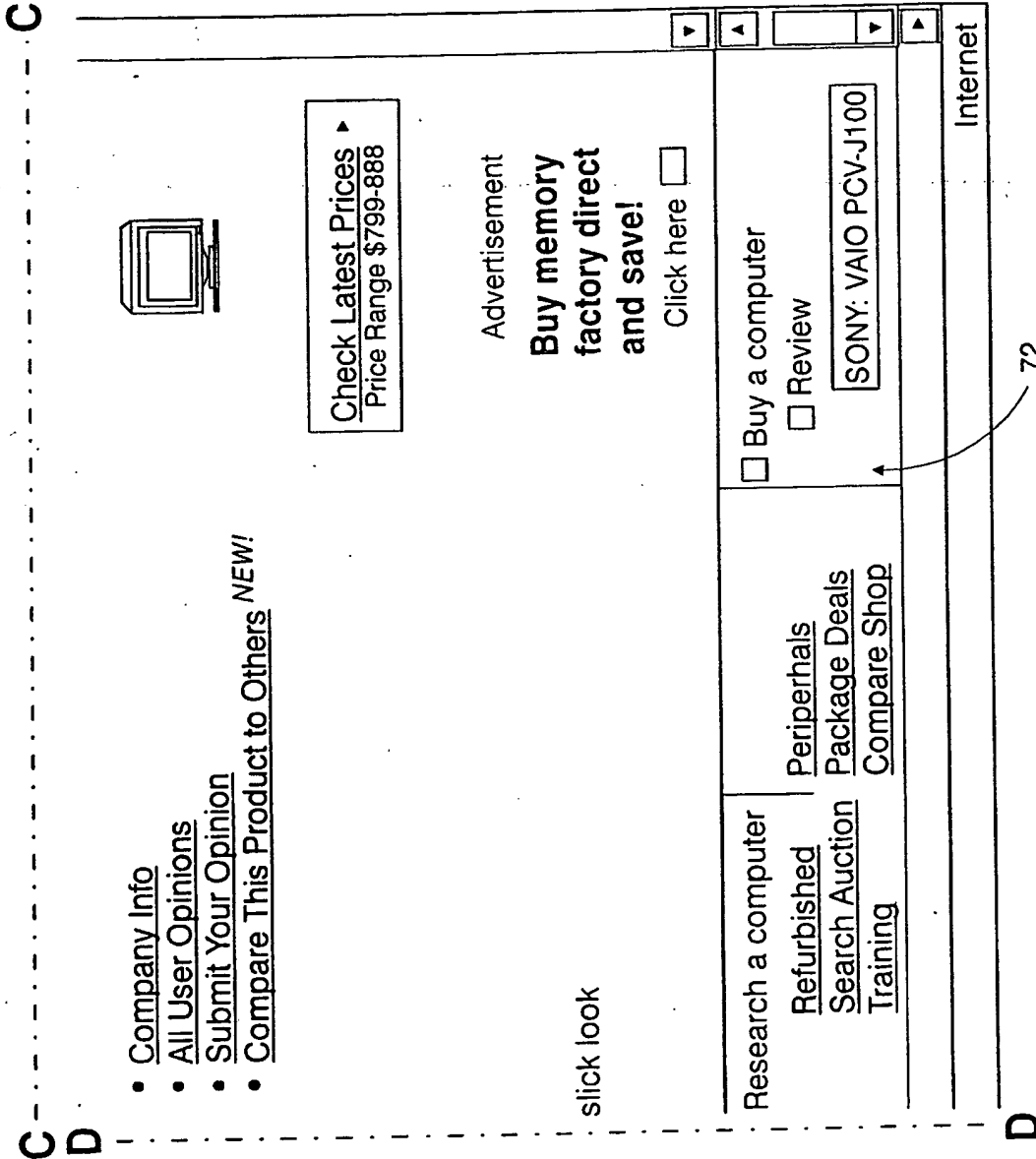


Figure 7D

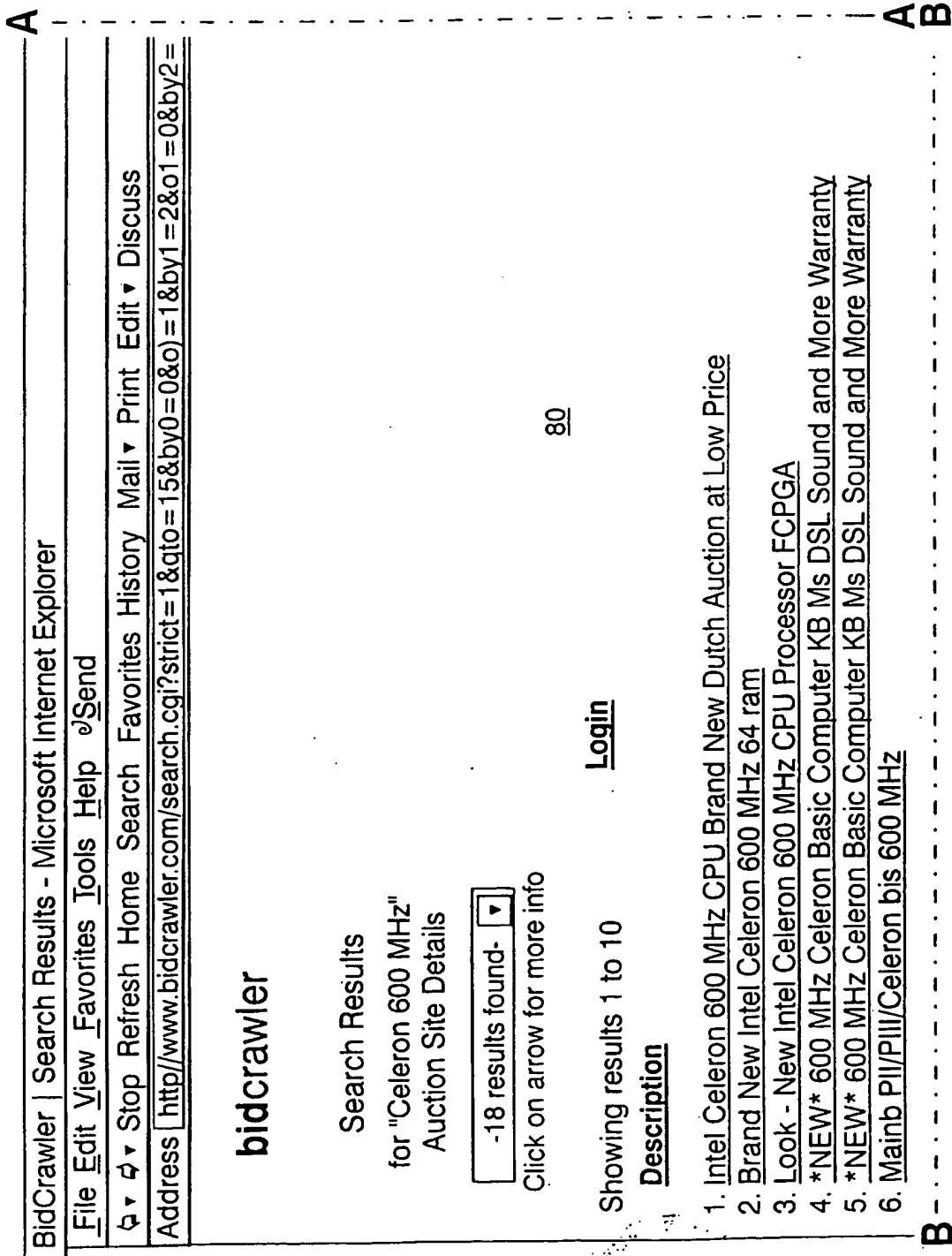


Figure 8A

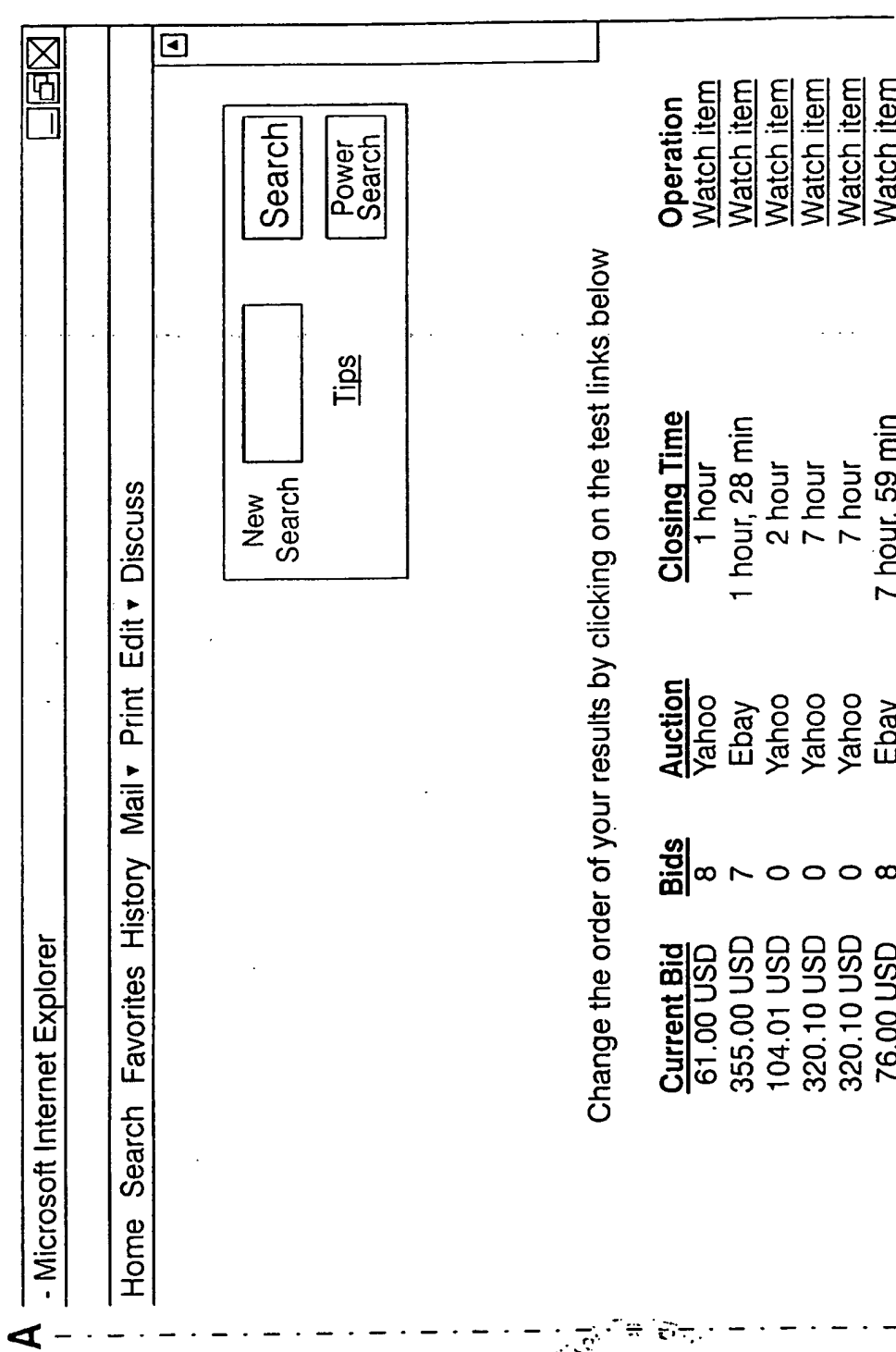


Figure 8B

7. *NEW* 600 MHz Celeron Upgrade Computer - Vid Mdm Net Sound and More Warranty
8. *NEW* 600 MHz Celeron Upgrade Computer - Vid Mdm Net Sound and More Warranty
9. Celeron 600 @ 900 MHz PC-PGA Nagelneu !
10. Mainb. PII/PIII/Celeron bis 600 MHz
11. Intel PII Celeron 600 MHz 370 pin "Brand New"
12. New Celeron 600 MHz Processor Retail Sealed
13. Mainb. PII/PIII/Celeron bis 600 MHz
14. Mainb. PII/PIII/Celeron bis 600 MHz
15. Intel Celeron 600 MHz FC-PGA NO RESERVE!
16. Intel Celeron 600 MHz FC-PGA NO RESERVE!

Figure 8C

234.01 USD	0	Yahoo	9 hour	Watch item
234.01 USD	0	Yahoo	9 hour	Watch item
67.00 USD	0	Ebay	1 days, 2 hour, 41 min	Watch item
228.50 USD	17	Ebay	1 days, 3 hour, 40 min	Watch item
84.95 USD	0	Ebay	1 days, 5 hour, 36 min	Watch item
51.11 USD	9	Ebay	1 days, 7 hour, 31 min	Watch item
93.00 USD	0	Ebay	2 days, 9 hour, 29 min	Watch item
79.95 USD	0	Ebay	3 days, 2 hour, 18 min	Watch item
70.00 USD	0	Ebay	4 days, 30 min	Watch item
70.00 USD	0	Ebay	4 days, 40 min	Watch item

a computer	<input type="checkbox"/> Buy a computer
Refurbished	<input type="checkbox"/> Review
Search Auction	<input type="checkbox"/> Search Auction
Training	<input type="checkbox"/> SONY: VAIO PCV-J100

Internet

72

Figure 8D

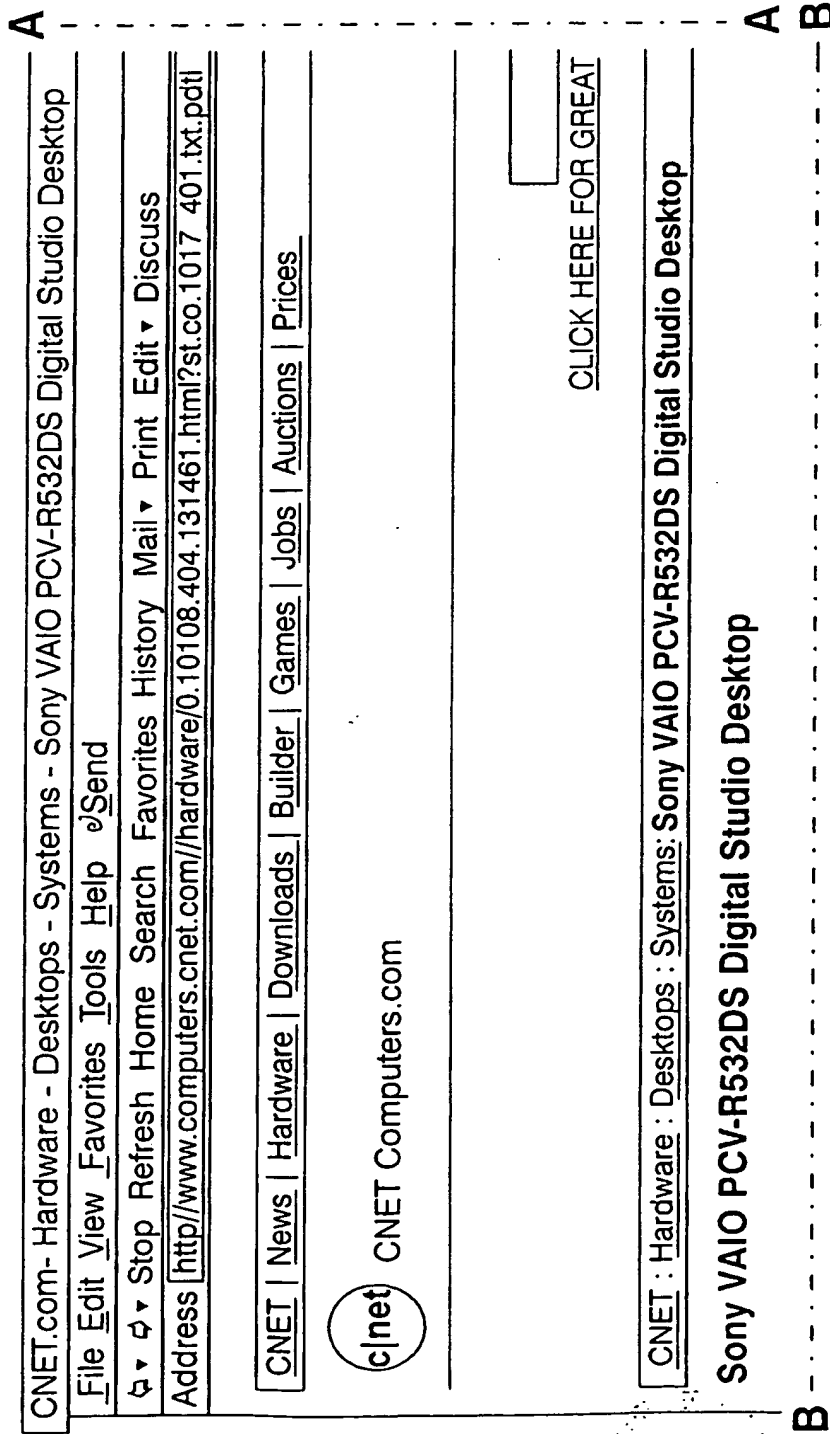


Figure 9A

2008220 242000T

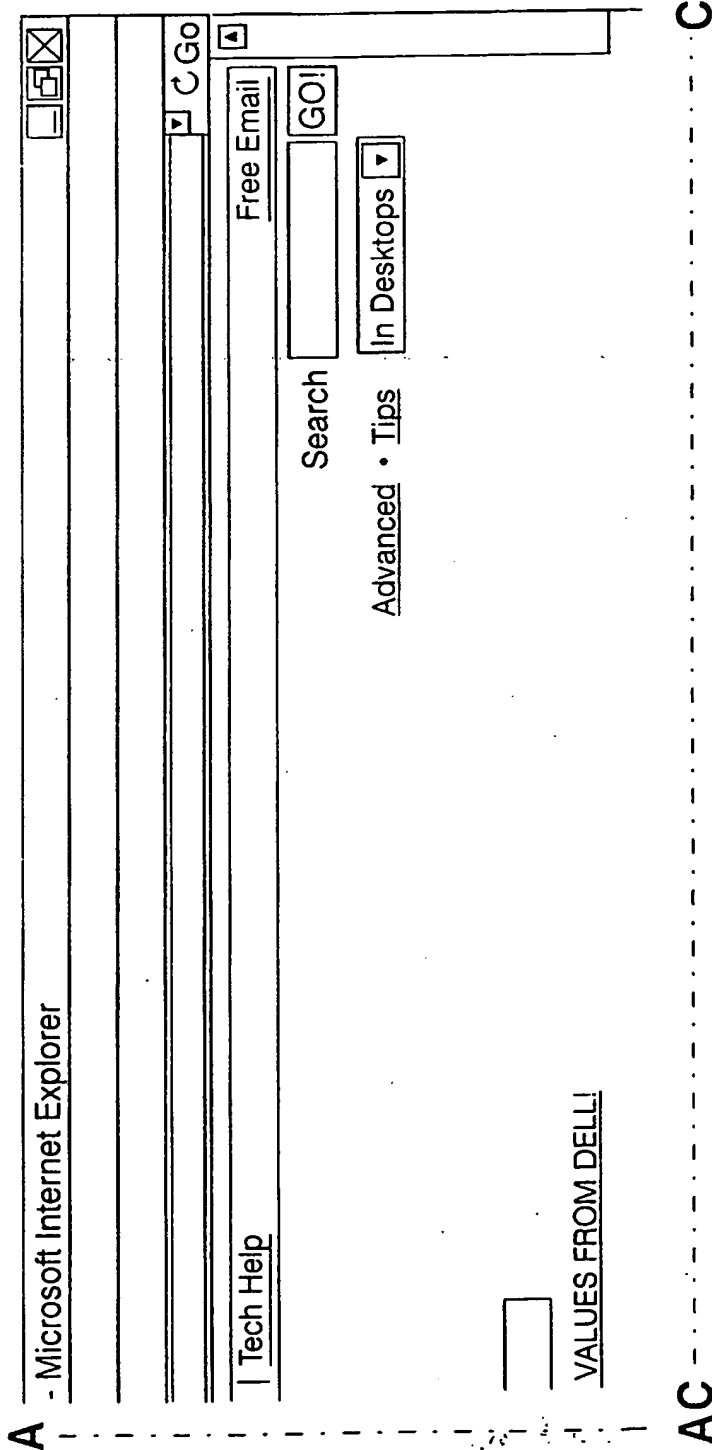
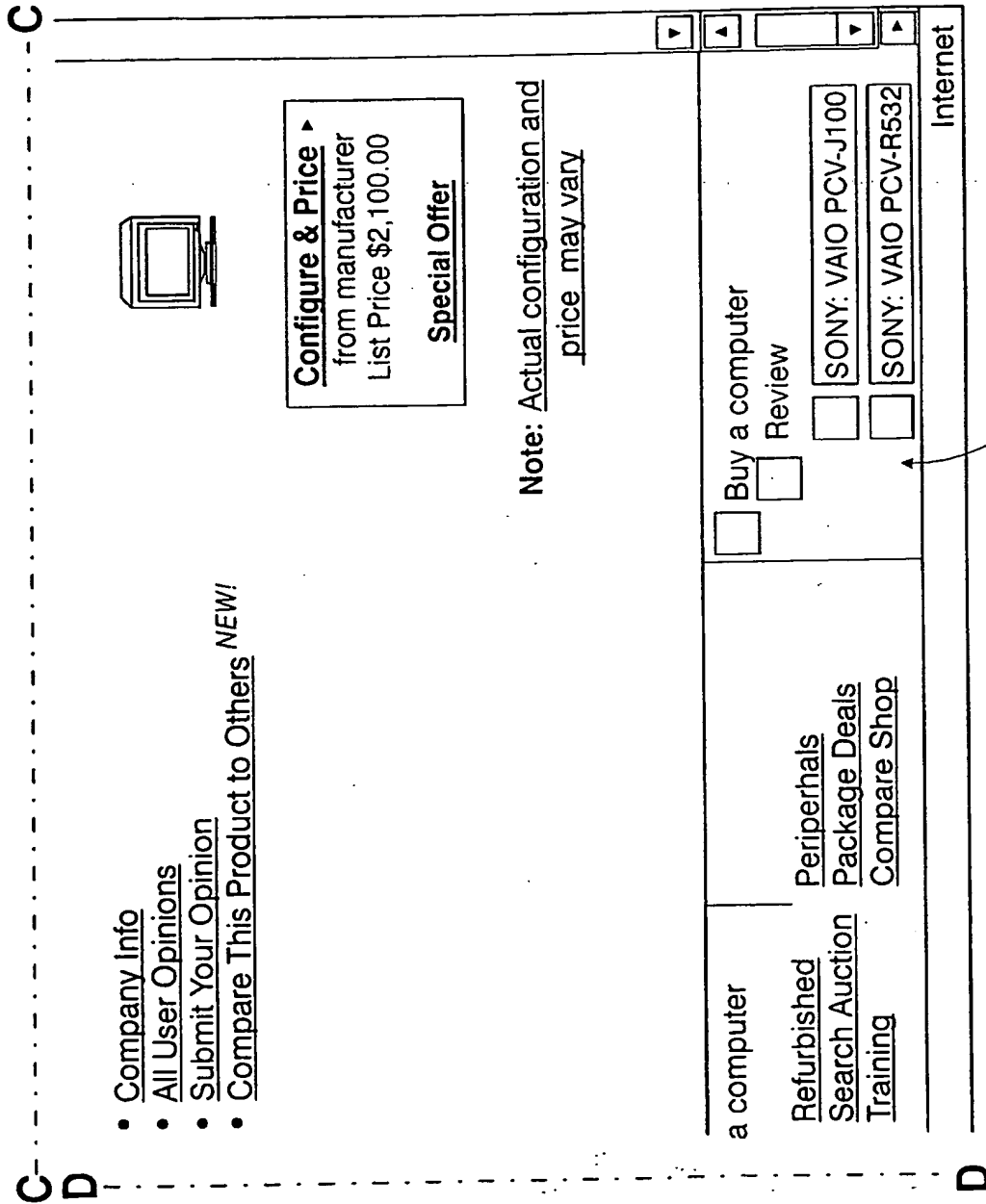


Figure 9B

B	D	<ul style="list-style-type: none"> • Full Review • Performance Chart • Specs • Check Latest Prices • More From This Company 			
B	D	<p>CNET Review</p> <p>Rating: 1 2 4 5 6 7 8 9 10 best</p> <p>The good: Provides IEEE 1394 support, excellent software, Sony Trinitron monitor</p> <p>The bad: Slow processor and small hard drive don't mesh with multimedia features</p>			
X		Compag	Buy a computer SONY: VAIO PCV-R53	Learn about computers Purchase Warranty Internet Service	Research Review Software Books
			Specify		

Figure 9C



72

Figure 9D

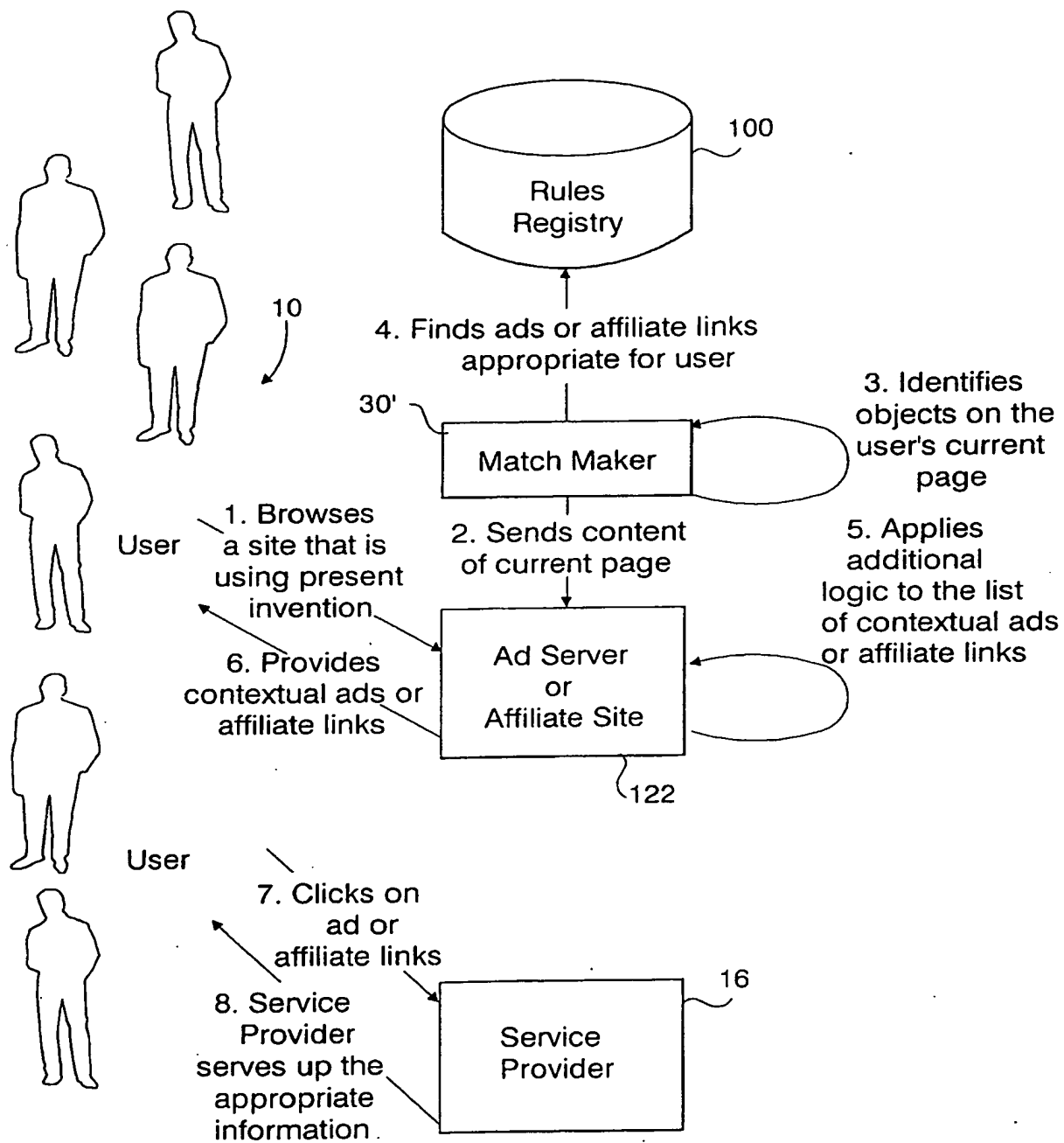


Figure 10

2008220" 2447000T

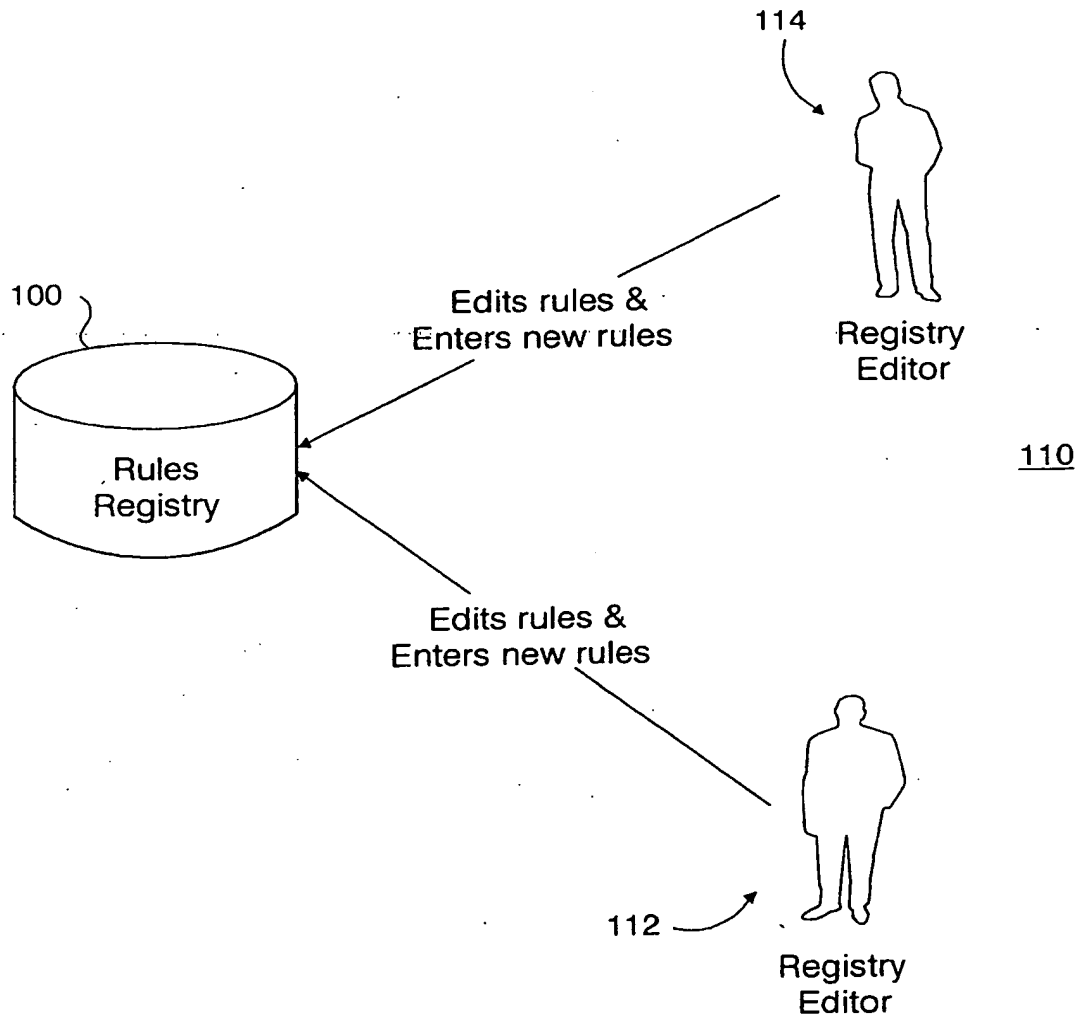


Figure 11



CNET.com - Hardware - Desktops - Systems - Compaq Presario 5900T-733

File Edit View Favorites Tools Help ↗Send


Address [W:\Final Deploy Access\ContextAd\cnet2.ht] ↵ Back ▾ ▹ Stop Refresh

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11ppm black • 9.5 ppm color
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Figure 12A

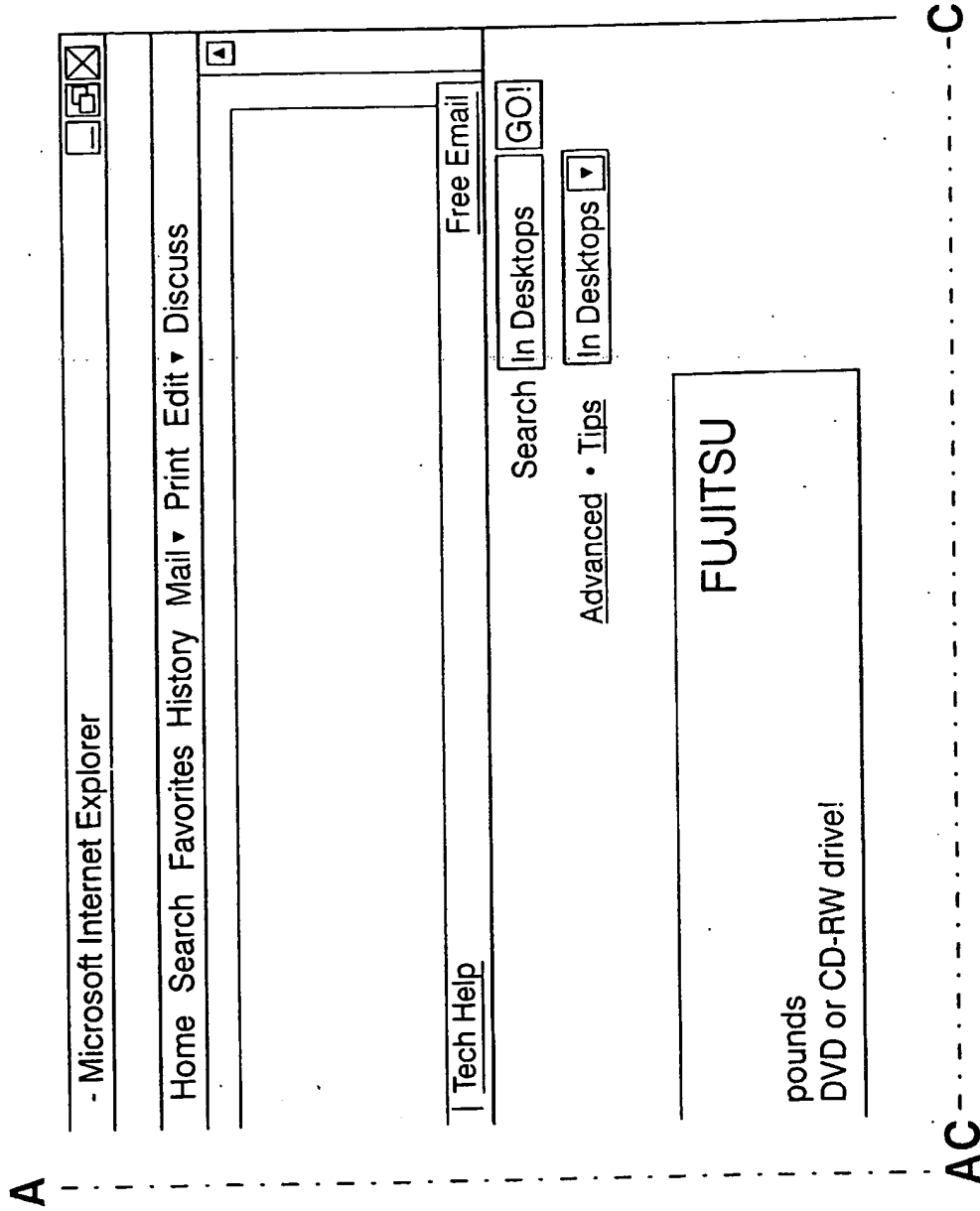


Figure 12B

Figure 12C

Figure 12C

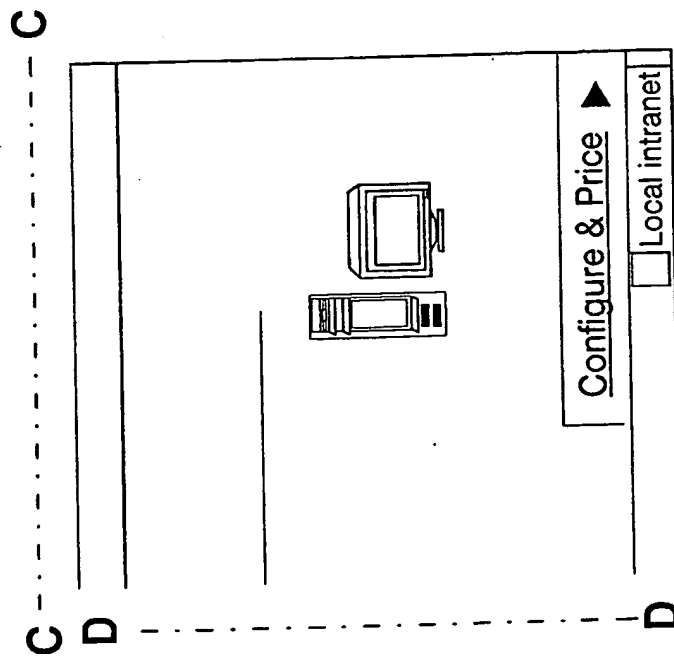


Figure 12D

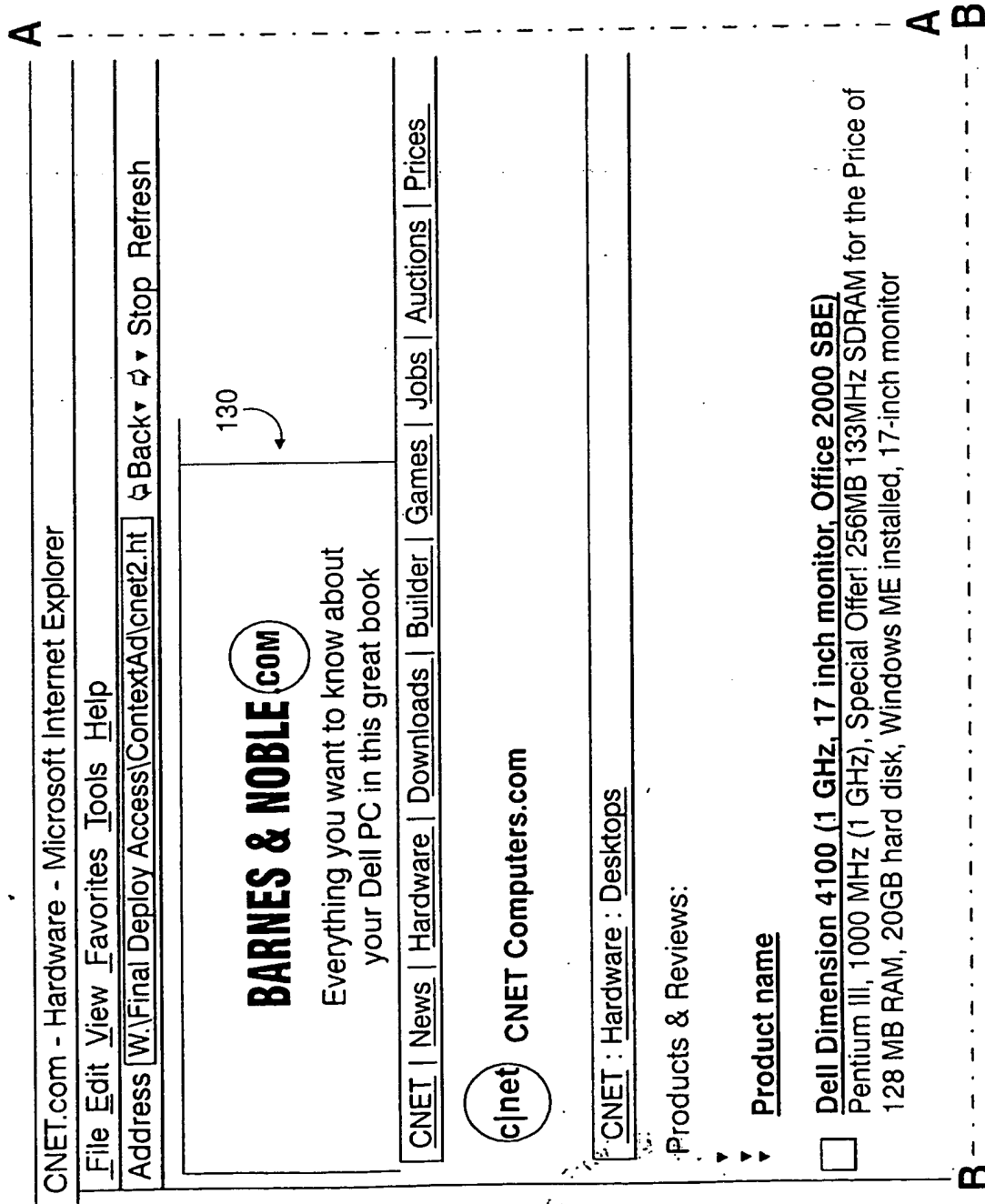


Figure 13A

A-----C

Home Mail ▾ Print Edit ▾ Discuss

Tech Help

Free Email

Search

GO!

Advanced • Tips

In Desktops ▾

Rating

9/10

review

☐ Editors Choice

Priced

Configure & Price ▾

List Price \$1,498

AC-----C

Figure 13B

B ----- **B** **D**

☐ Dell Dimension XPS B1000r (Pentium III, 1 GHz, 128 MB RDRAM)
Pentium III, 1000 MHz (1 GHz), 128 MB RAM, 30GB hard disk, Windows 2000 installed,
19-inch monitor

☒ Dell Dimension 8100 (Pentium 4, 1.5 GHz)
Pentium 4, 1500 MHz (1.5 GHz), 128 MB RAM, 40GB hard disk, Windows ME installed,
19-inch monitor

☐ Done **D**

Figure 13C

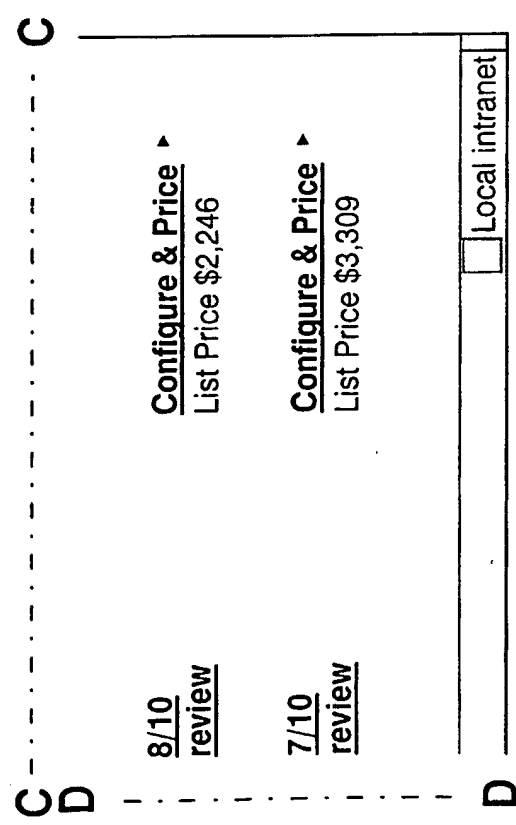
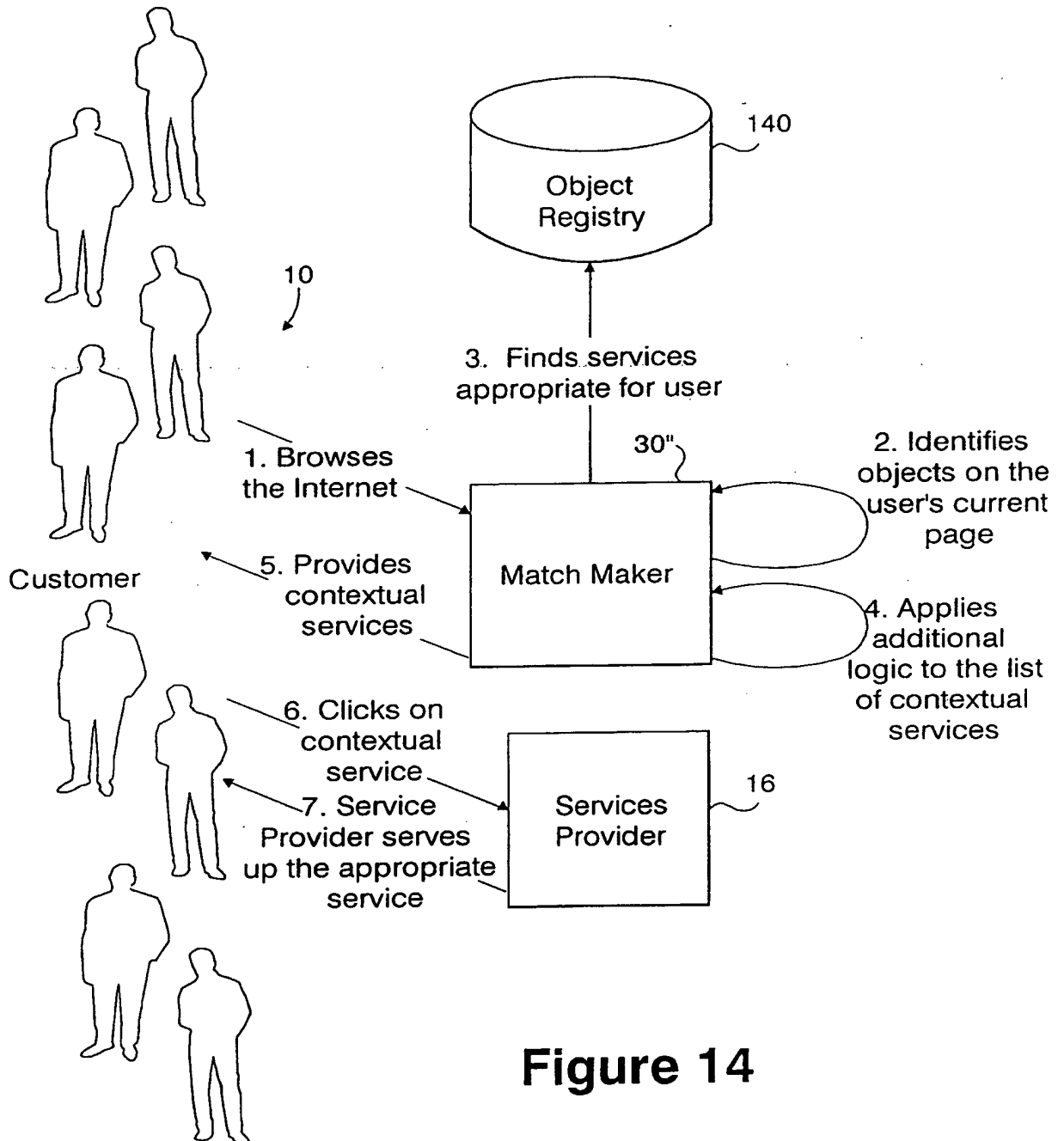
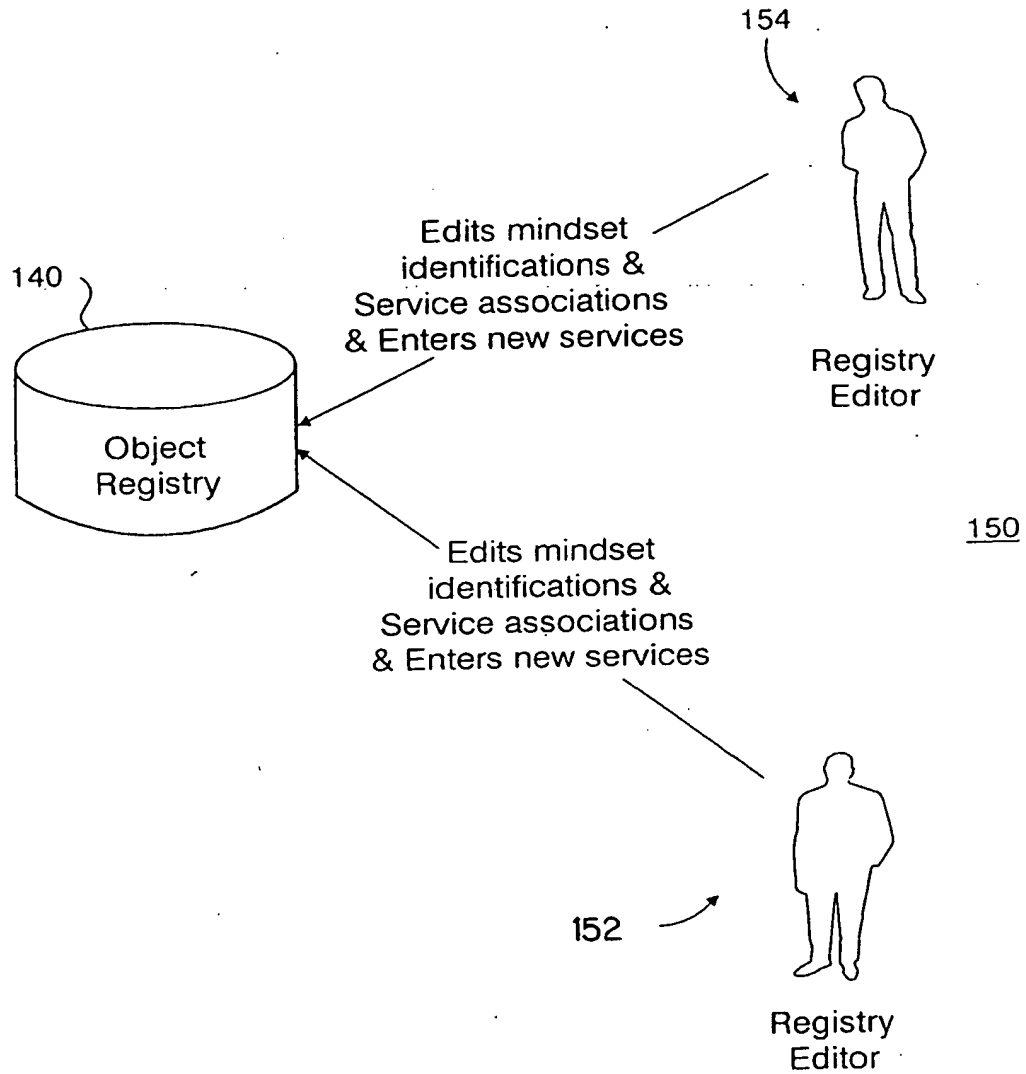


Figure 13D

**Figure 14**

**Figure 15**

20030220 2225000T

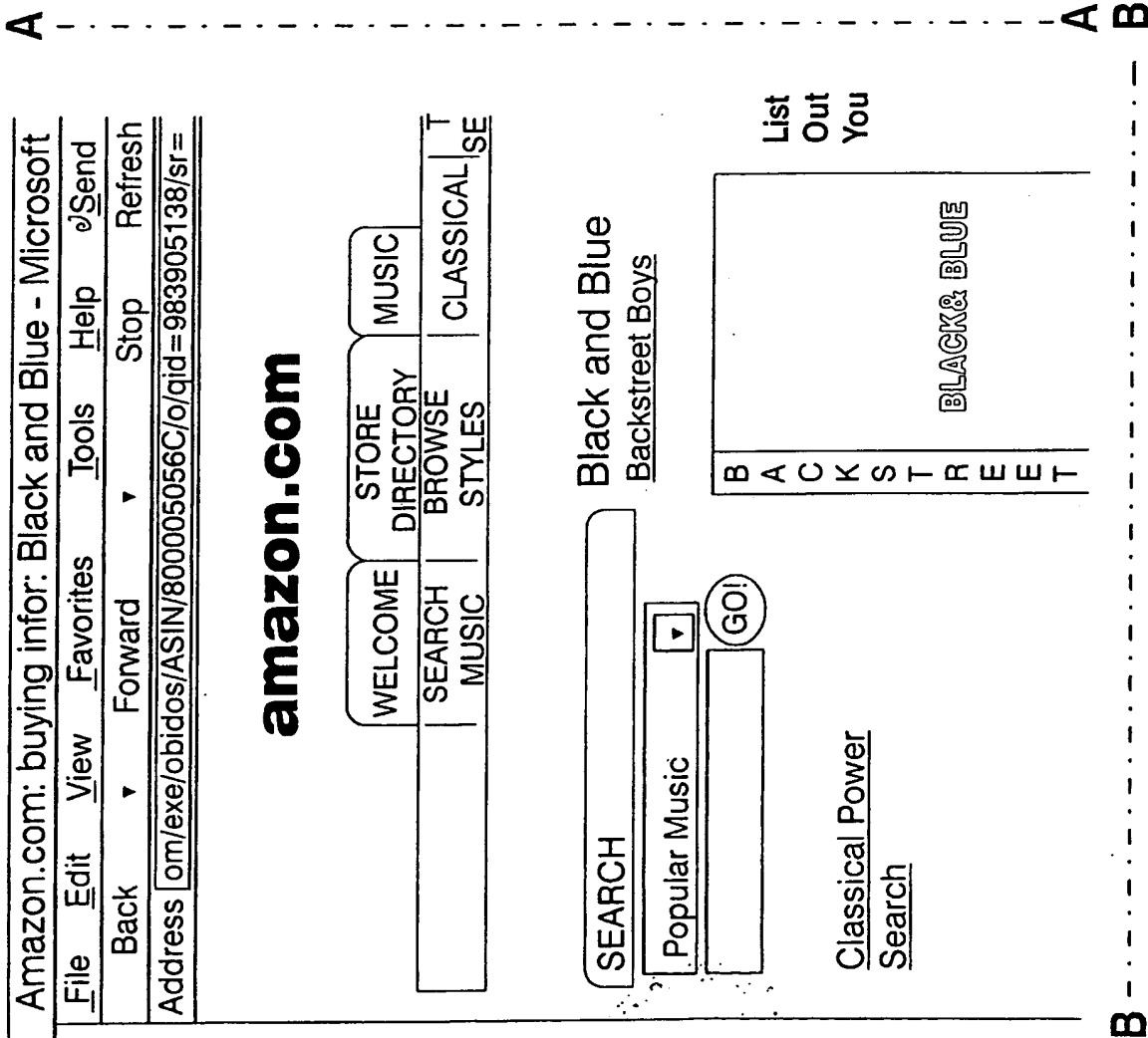


Figure 16A

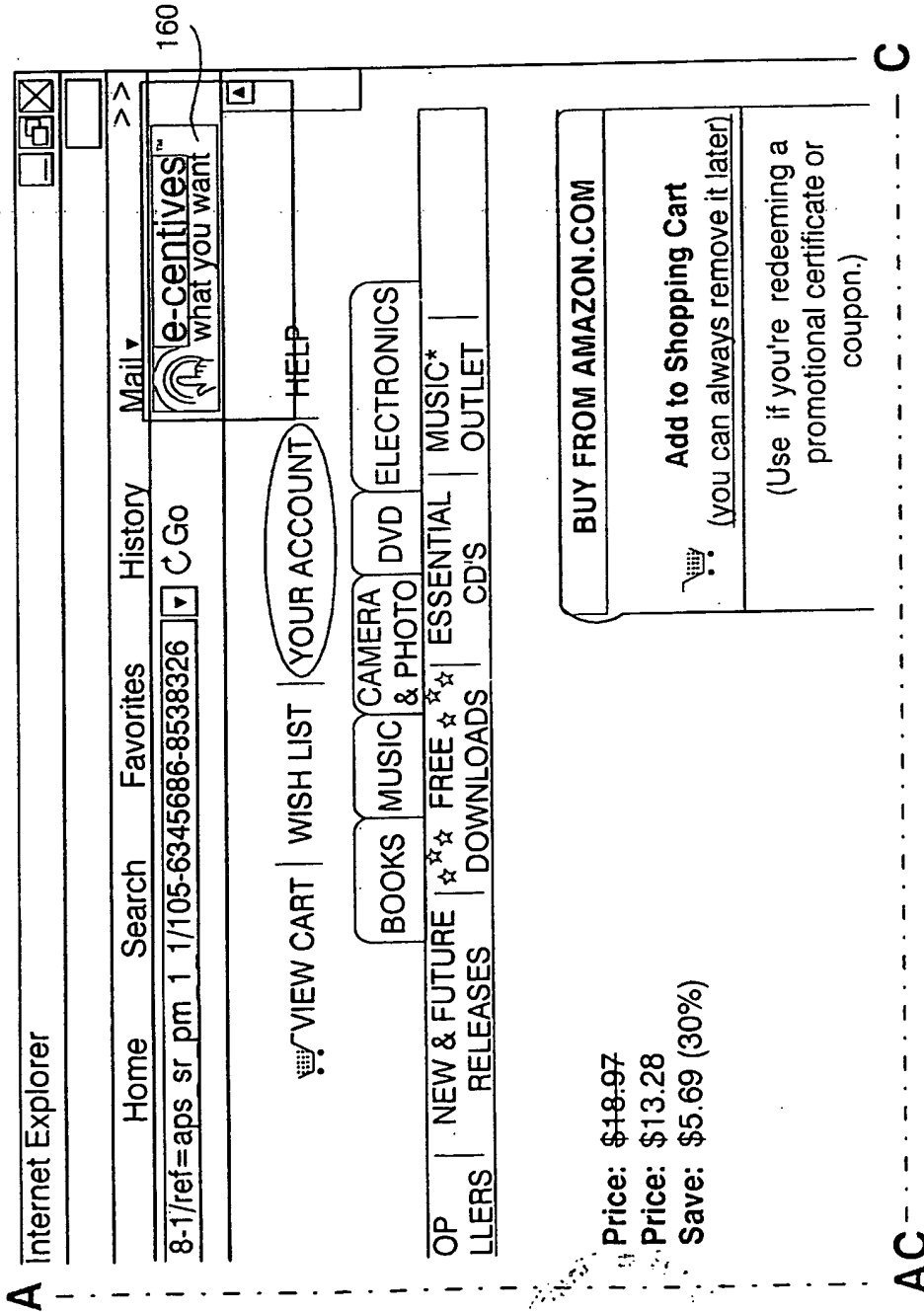


Figure 16B

B

D

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Figure 16C

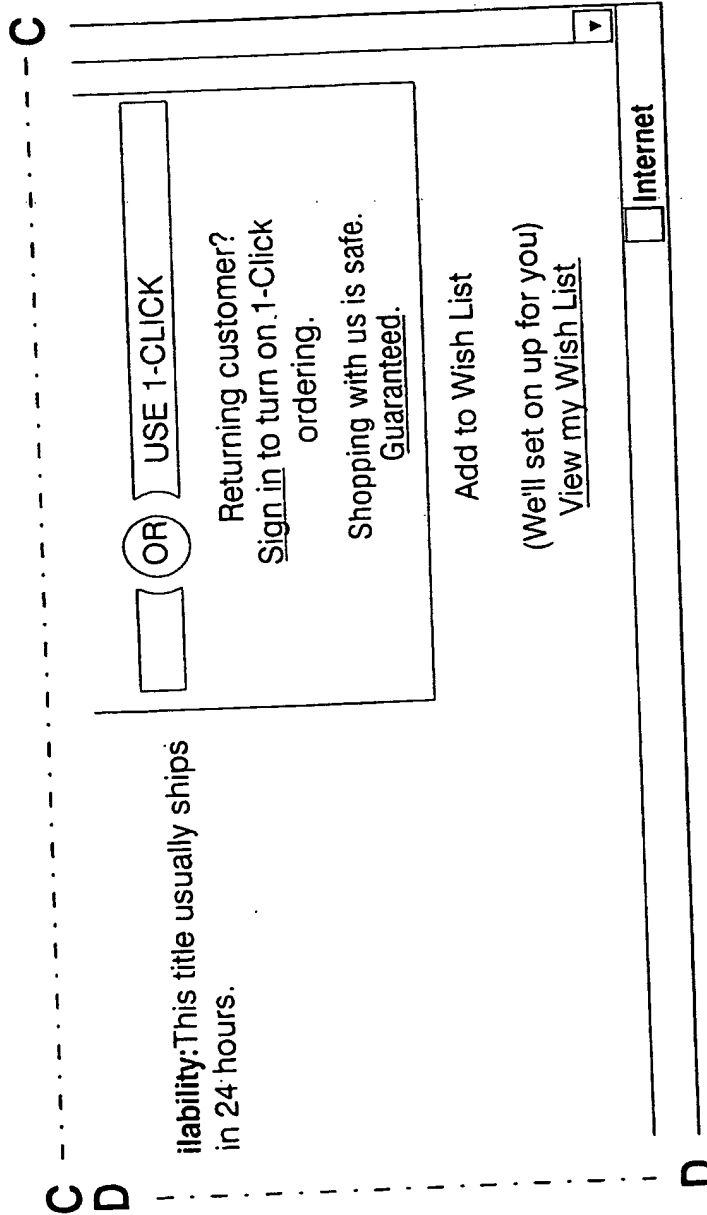


Figure 16D

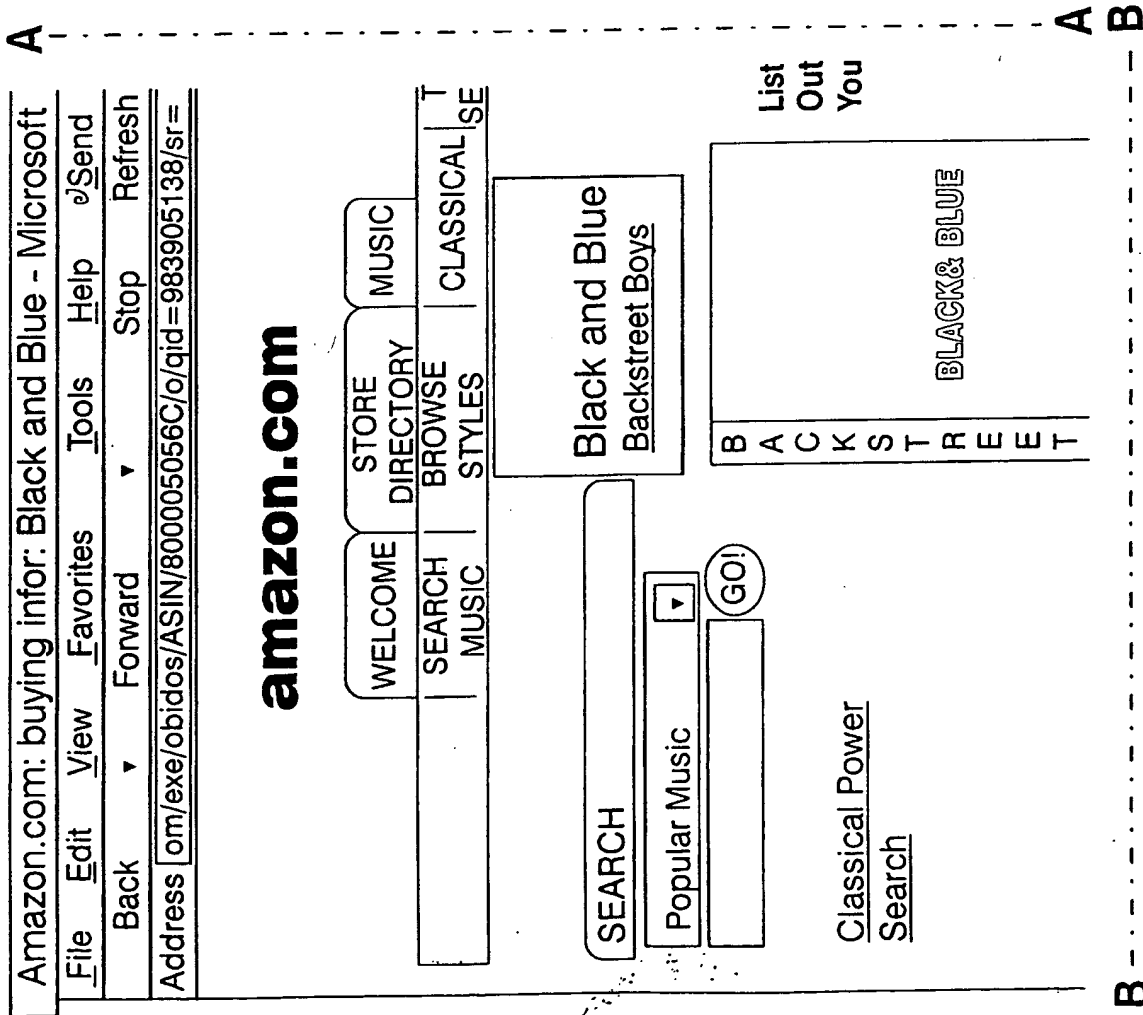


Figure 17A

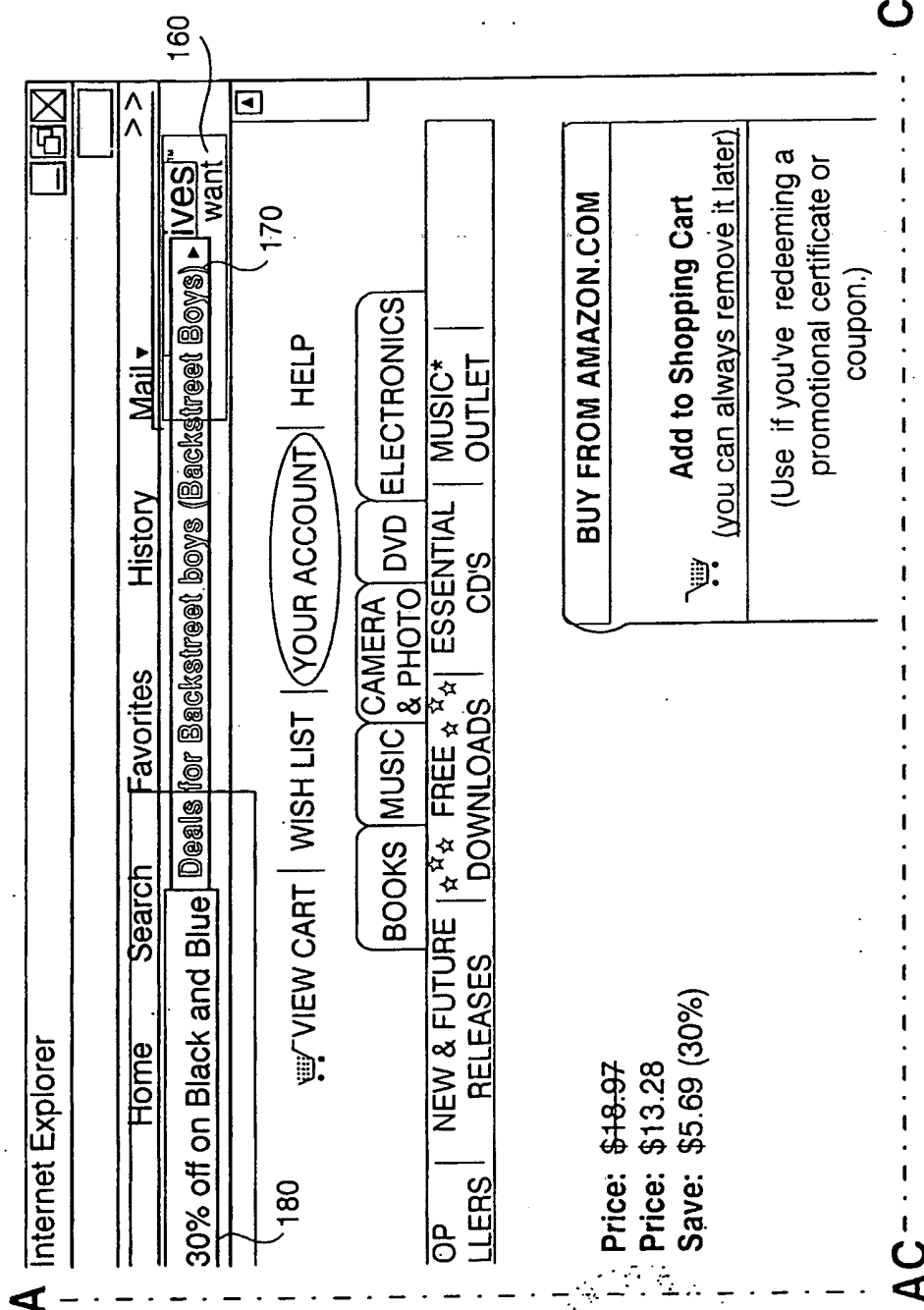


Figure 17B

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http://www.amazon.com/exec/obidos/wishlist/ref=nwl_music/105686-8538326

Figure 17C

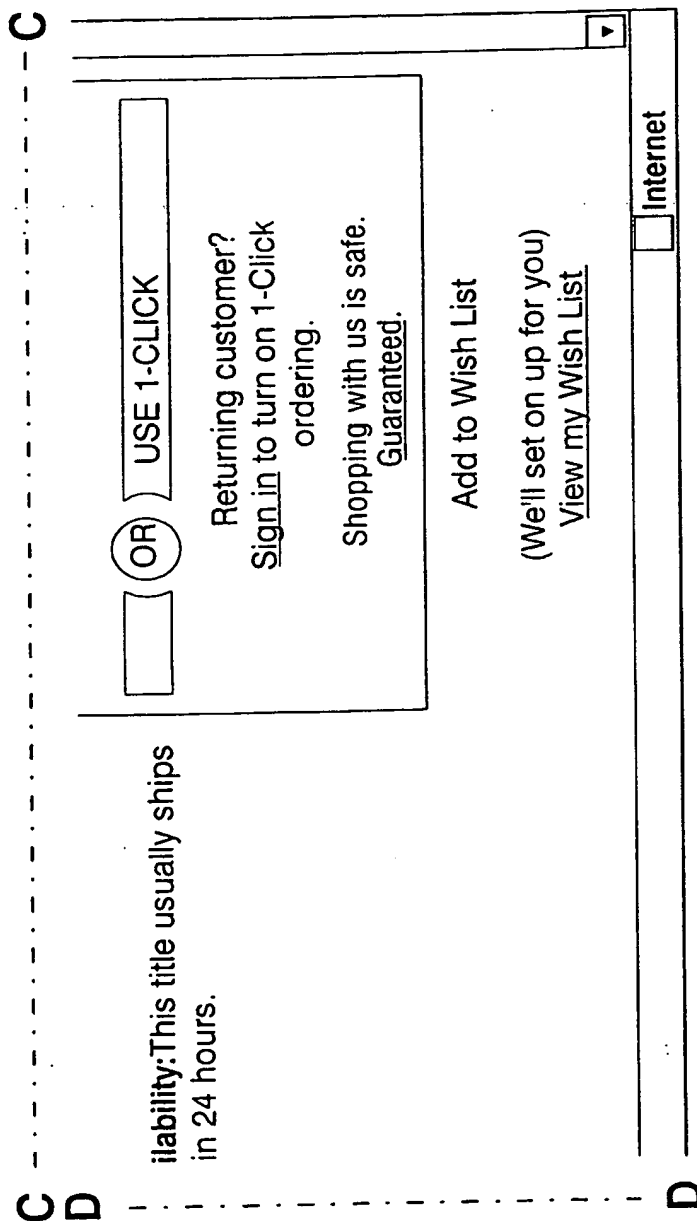


Figure 17D

200820"244FOOT

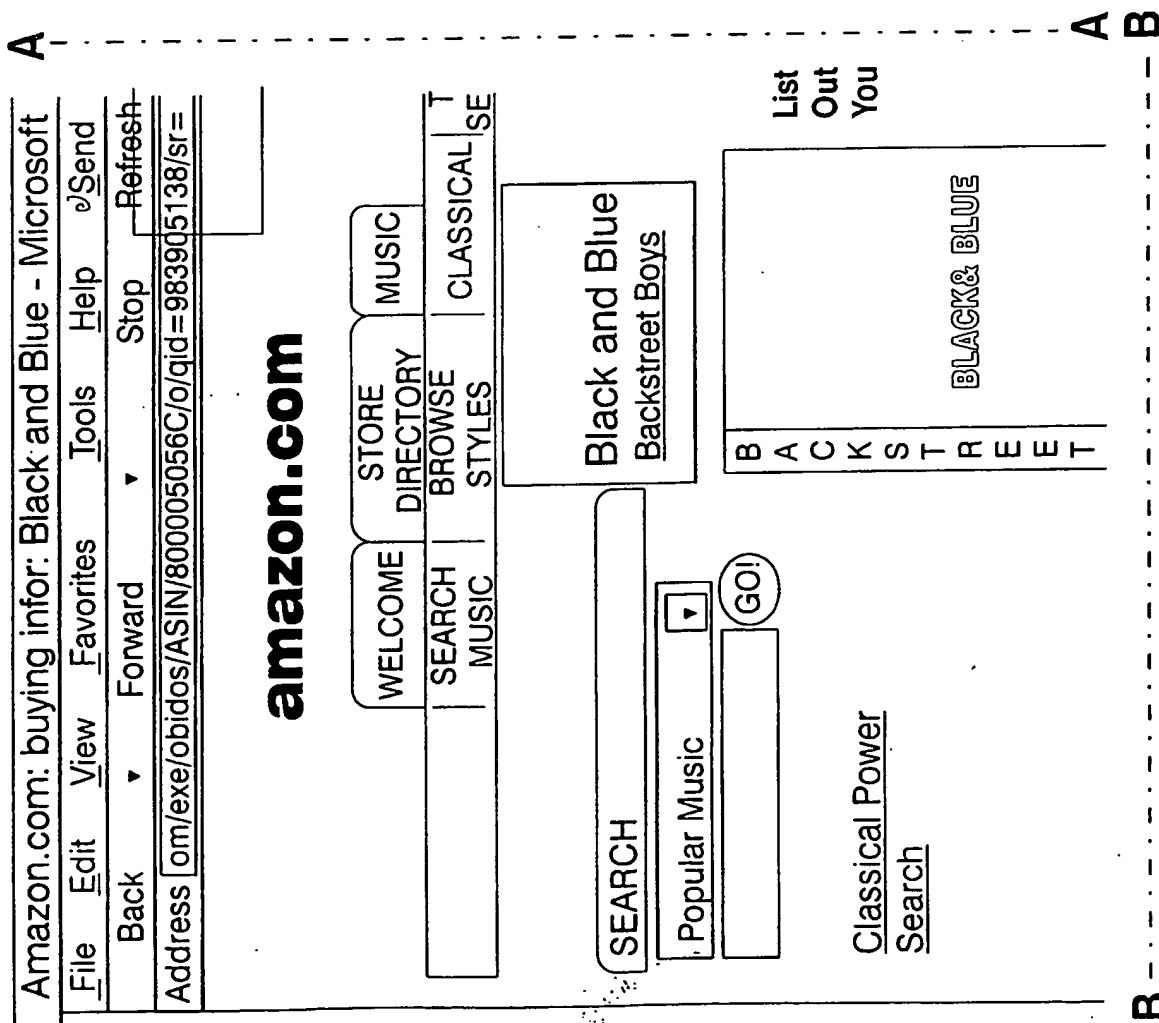


Figure 18A

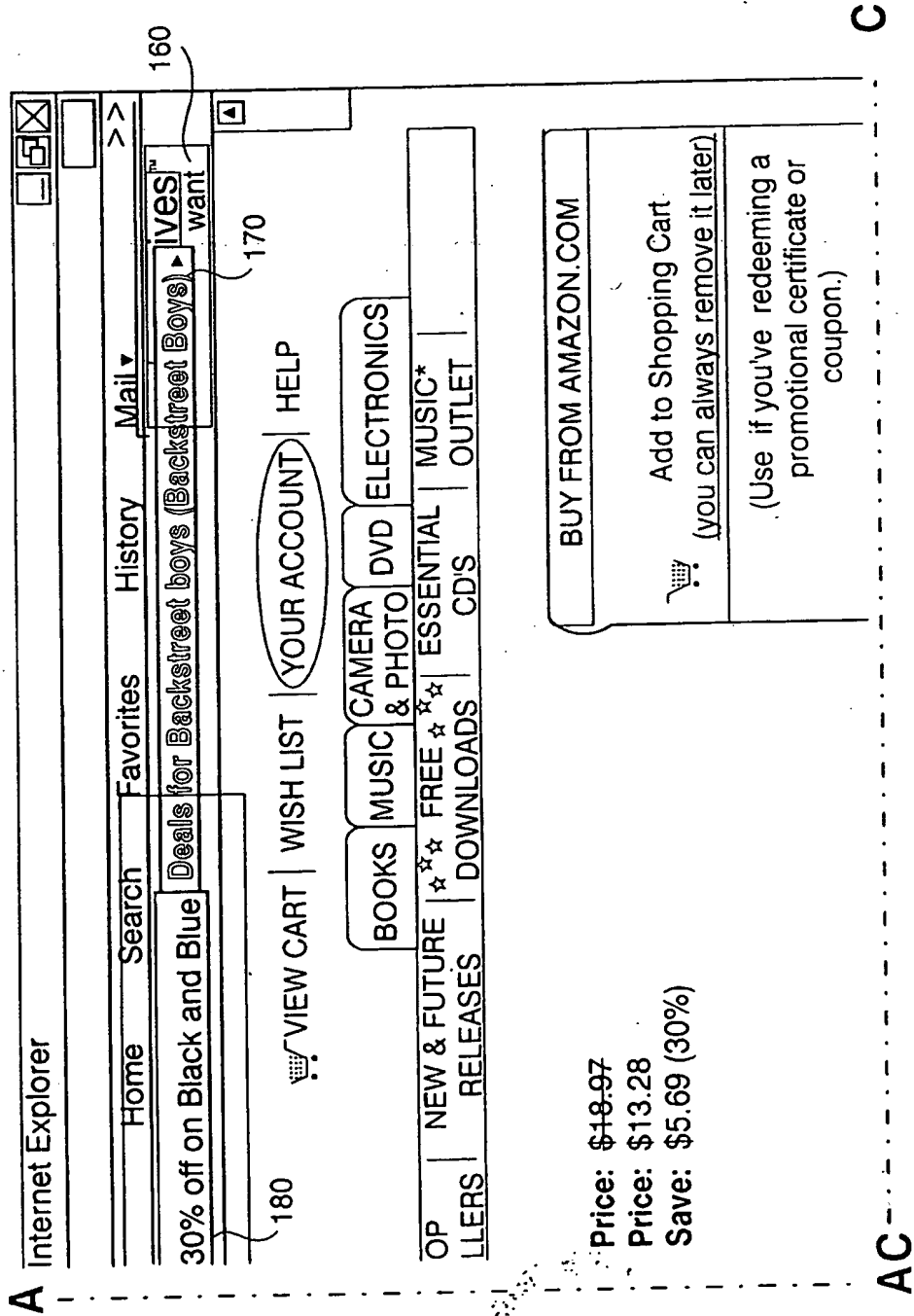


Figure 18B

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http://www.amazon.com/exec/obidos/wishlist/ref=nl_music/105686-8538326

Figure 18C

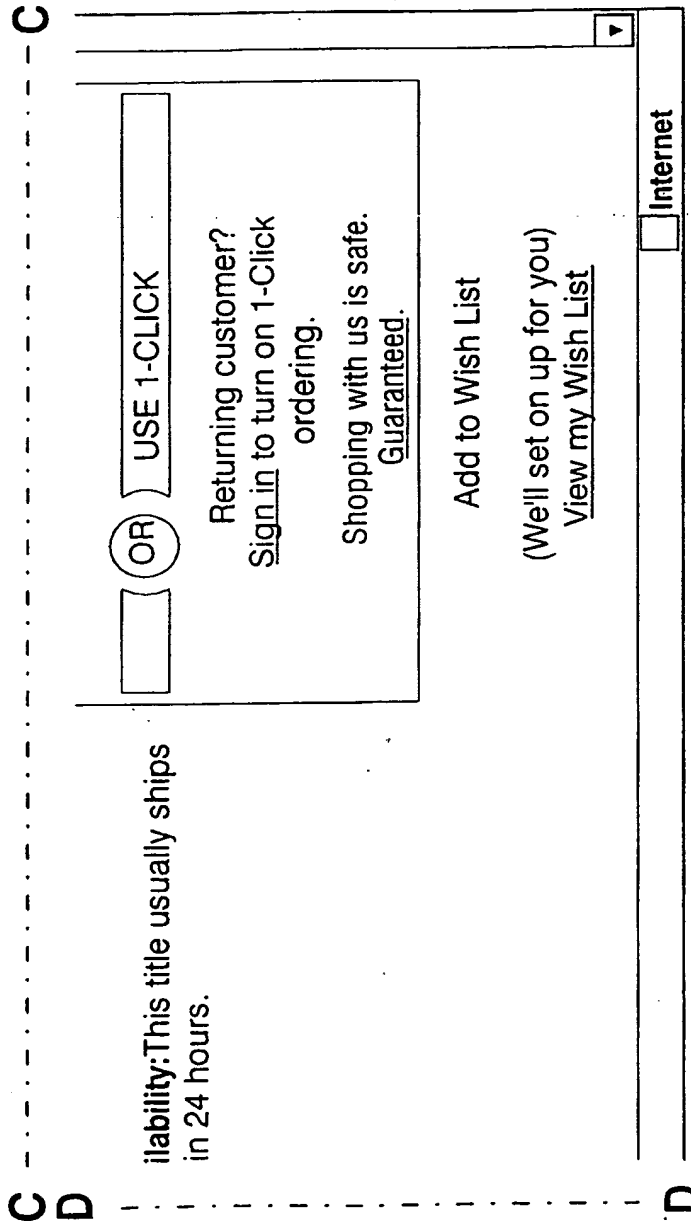


Figure 18D

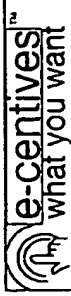
my e-centives - SAVE 30% - Microsoft Internet Explorer

File Edit View Favorites Tools Help eSend

Back Forward Stop Refresh

Address [envlet/product/ehhtml/shopFrameset?offer=\(2ff585a0-c56](#)

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expires 3/22/01

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books music dvd/video kids netcafe gift ce

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List:\$18.99

Out Price:\$13.29

You Save:\$5.70(30%)

Availability: This title usually ships in 24 hours

Add to Shopping Bag

Black & Blue

1 Compact Disc,

BACK STREET

BLACK&BLUE

Performer: Backs

Guest Artist: Baby

Figure 19A

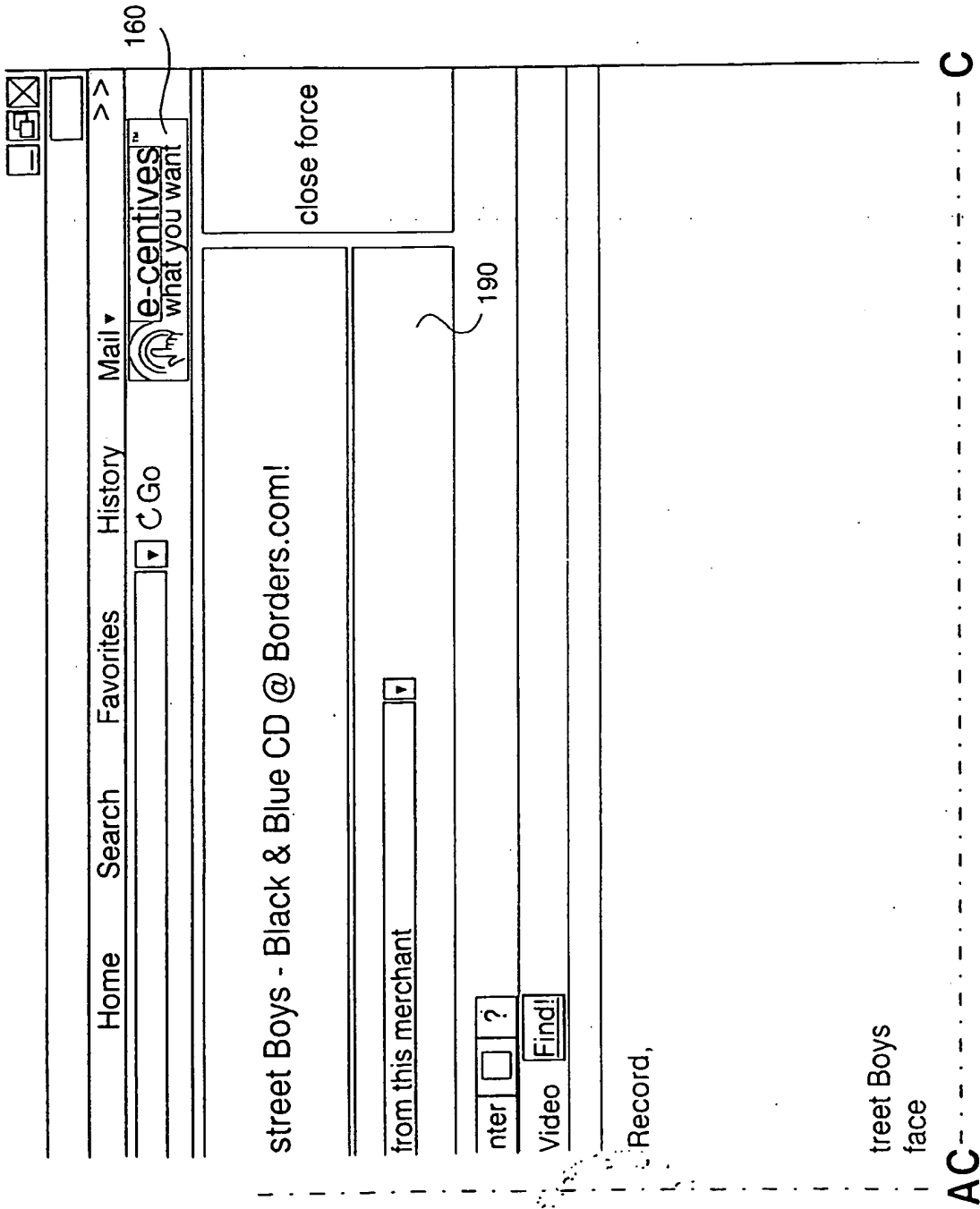


Figure 19B

B	D
<u>Appears In:</u>	<u>Subject/Style:</u> Rock/Pop, Teen, General,
<u>New Releases: Music</u>	
<u>New Releases: Pop & Rock</u>	
<u>New Releases: General Pop</u>	
<u>Track List</u>	
	1. The Call
<input type="checkbox"/> Done	
B	D

Figure 19C

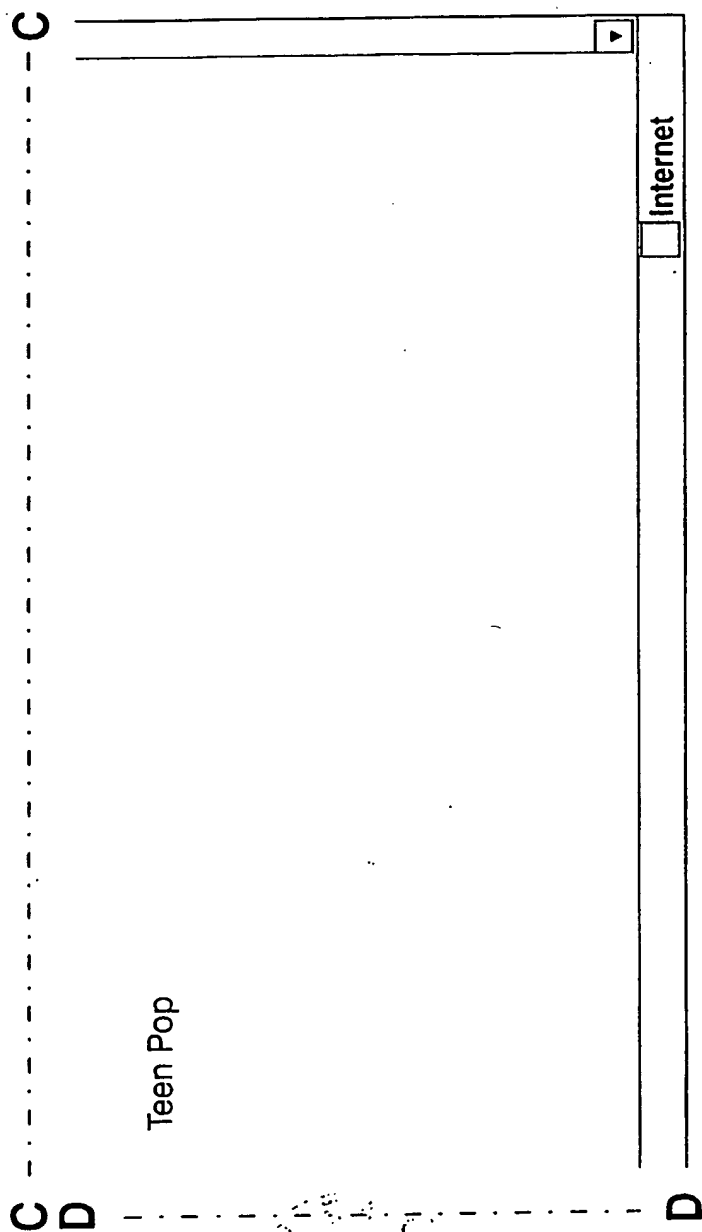


Figure 19D